Installation Instructions for AWIPS Release OB1

Please Call the NCF before you install OB1
PLEASE READ ENTIRE DOCUMENT BEFORE BEGINNING!

The OB1 install will take from 7 to 8 hours (Parts 1-12, and 14) to complete, depending upon the number of workstations. Part 13, the CP upgrade portion of the install, can be done on another day and will take another 2 to 3 hours to install. Part 0 (Pre-installation requirements) will take several more hours. Do Part 0 several or more days in advance of the OB1 install; it should take at least 2 hours. Doing Part 0 ahead of time is important because you may need to clean up some directories.

On the day of the install (Parts 1-12 and 14), call the NCF and tell them that you are doing the OB1 upgrade; give them the version date of the installation instructions. Coordinate with your service backup sites, as needed. After this, do the upgrade.

NOTE 1: **The text data ingest downtime will be 2 to 4 hours. Model data will be queued up by the PXs during the upgrade and should not be lost.**

NOTE 2: **The HP part of the system should be available to use 4 to 6 hours after starting the upgrade.**

NOTE 3: **After-Install Procedures (Part 14 on page 14-1) must be run at all sites as part of the OB1 upgrade. Steps 1-7 should be completed on the day of the install (Parts 1-12, 14), as appropriate. The procedures include:**

1. **Merge/Update of LDAD Files**
2. **Merge/Update of MSAS file**
3. **OH Post install Procedures**
4. **Maintenance Release(s) for OB1 (if applicable)**
5. **Miscellaneous Post install procedures**
6. **GOES-12 related procedures**
7. **Run Post Install ICAT (Optional)**
8. **Secure a Good Level 0 Archive as a Backup**
9. **Secure a Good LDAD Backup**
10. **Checking DS Server Failover Configuration**

NOTE 4: **DO NOT use <CTL-C> to stop installation scripts during the install.**

NOTE 5: **DO NOT PROCEED if any unexpected problems are encountered. Instead, contact the NCF immediately before taking any action.**

Preface

Important Information

1. In order to save some time during the OB1 upgrade, you will be given the option of doing two portions of the upgrade at the same time. In Part 8, **Install OB1 FXA/System Software**, at step 4A you will be running the "install_OB1" script which takes about 3 hours to complete. In OB1, as the "install_OB1" script runs, you may also go to Part 10 and install RedHat 7.2 on LX1 and LX2. The RedHat upgrade on LX1 and LX2 will take about 1 ½ hours to complete. The instructions at the end of Part 10 will point you back to Part 8 step 4B if you choose the concurrent option, or to Part 11 if you did not.

2. Because Part 13, Install CP software, could take up to 3 hours to complete, most sites will want to do this one or more days **after** the rest of the OB1 upgrade (part 1-12, 14). Should you do it on another day, it should be done Monday -Thursday during the normal support hours of 7AM to 7PM EST.

   If Part 13 is installed on a different day, you will need to call the NCF before you proceed. Service backup for the CP upgrade should not be necessary because when the CPSBN1 is upgraded, AWIPS will fail over to CPSBN2. The reverse is true when the second CP is upgraded. It should be noted that in order to do the CP software upgrade, the installer will need a VGA monitor, keyboard, and a mouse. In Part 13, steps 4 and 12 you will need to move the CAT-5 cable from the 100/10 Ethernet port to the 1GbE Ethernet port.

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PART 0: Pre-installation Requirements (complete before day of install)

Important: Read and perform all of the following steps as applicable in Part 0 **several days or more** before you do the rest of the OB1 upgrade.

1. **Prerequisites**. The following list describes items that the OB1 install expects to have in place before the upgrade begins.

   - At least the 5.2.2.1 maintenance release has been installed.
   - At least the IFPS 12.3 release has been installed at WFO type systems.
   - The WFO Archive Server (WAX) is installed and running on WFO systems.
   - The PX Pre-processors are installed and running.
   - **Assumption:** In Part 11, it is assumed that both LX1 and LX2 are installed and operating. If **both** are not hooked up and running R5.2.2.x, the script "installLX-PXOB1.sh" will fail. If the site does not have both LX1 and LX2 installed, the script installLXOB1.sh will need to be modified. (Your NGIT install point of contact for the upgrade can help, if necessary.)

2. **Coordination**. You will need to coordinate your upgrade with other sites, if applicable.

   - Coordinate your install date with your backup site(s).
   - If you are a Weather Wire uplink site, ensure (through your Regional Focal Point) that your backup Weather Wire uplink site(s) are not also doing the upgrade when you are.
   - If you have a CWSU with its LINUX box attached to one of your AWIPS WSs, ensure you coordinate the install with the CWSU since they won't be able to use their system while you upgrade to OB1.

3. **Check for Lessons Learned/Addendum**. After several early sites complete their installation, many will have comments, additions, corrections and clarifications to this document. For this reason, a lessons learned/addendum document will be created and posted to http://www.ops1.nws.noaa.gov/awips_softwre.htm. This document will be updated frequently during the first few weeks of deployment. You should check the webpage to see if it exists, and if it does, download it and combine it with this document. Also, you should check the webpage again a few days before your actual upgrade to see if a more updated version is available.

4. **Download Files**. You will need to download a number of files, including NDM files and scripts from noaa1 before the installation of OB1. They will be placed in a safe directory until install day and then be moved to their proper location just before installation. In Part 8, you will run the moveob1files.sh script to copy the appropriate files into place. The following tables lists the files and their final directory location. Specific instructions

on downloading the files are listed below the tables. **If you have made any localized changes to these files on your system, you will need to merge those into the downloaded files before install day.** Note: Send NDM changes that are applicable to the national datasets to Fran Curnow (*frances.curnow@noaa.gov*)

Filename	Directory Location at NOAA1 server before download	Final directory location after upgrade
dataInfo.manual	/pub/ndm/OB1	/data/fxa/nationalData
depictInfo.manual	/pub/ndm/OB1	/data/fxa/nationalData
productButtonInfo.txt	/pub/ndm/OB1	/data/fxa/nationalData
afos_lookup_table.dat	/pub/ndm/OB1	/awips/fxa/data
metarStationInfo.txt	/pub/ndm/OB1	/awips/fxa/data
moveob1files.sh	/pub/BuildOB1	/data/local/nationalData
AWIPScheckout.sh	/pub/BuildOB1	/home/awipsadm/install

In addition, there are 5 files that WFO systems will need to download. These are fire weather shape files. The '*' represents the date the files were placed on the noaa1 server. For example, fz21nov02.bp. However, when these files are merged into your system in Part 8, the names will be changed to firewx.bp, .dbf, .dbx, .shp, and .shx, as appropriate.

The following fire weather files will be downloaded by WFO systems only.

Generic Filename	Directory Location at NOAA1 server before download	Final filename and directory location after upgrade
fz*.bp	/pub/maps	/data/fxa/nationalData/firewx.bp
fz*.dbf	/pub/maps	/data/fxa/nationalData/firewx.dbf
fz*.dbx	/pub/maps	/data/fxa/nationalData/firewx.dbx
fz*.shp	/pub/maps	/data/fxa/nationalData/firewx.shp
fz*.shx	/pub/maps	/data/fxa/nationalData/firewx.shx

Download procedure:

A. From a HP graphics workstation, log in as root, open a telnet window, and login to the DS1 as root.

```
rlogin ds1
```

B. Go to the "/data/local/nationalData" directory.

```
cd /data/local/nationalData
```

If this directory doesn't exist, you will need to create it by using the `mkdir` command.

If the directory does exist, use the list command to ensure that the files you downloaded in R5.2.2 were deleted during the R5.2.2 upgrade. If not, **delete those files now**.

```
ll /data/local/nationalData
rm /data/local/nationalData/*
```

C. Connect to the NOAA1 ftp server by entering the command:

```
ftp 165.92.25.15
```

Once you are connected to the NOAA1 ftp server, login as user `ftp`, with your email address as the password.

D. Get the national data and other files from the NOAA1 ftp server by entering:

1. `binary`
2. `hash`
3. `prompt` *(Use this only if you don't want to get prompts for each file)*
4. `cd /pub/BuildOB1`
5. `mget *` *(You should receive 2 files from this command)*
6. `cd /pub/ndm/OB1`
7. `mget *` *(You should receive 5 files from this command)*

WFO only 8. `cd /pub/maps`

WFO only 9. `mget fz*` *(You should receive 5 fire weather files)*

10. `bye`

E. Set permissions and relocate scripts. You will use the move command since we won't need them in the /data/local/nationalData directory anymore.

1. `chmod 755 *sh`
2. `mv AWIPScheckout.sh /home/awipsadm/install`

5. **System Check using AWIPScheckout.sh** This script has been updated in OB1. It will perform several checks that are needed before installation. As you run the script, output will be displayed on the screen, printed out, and written to three different files for further reference. Another script, called **check_process**, will be created when you run AWIPScheckout. This **check_process** script will be used in Part 4 on the day of install.

   A. Assuming that you are still logged into DS1 as root, change directories and run the following script.

```
cd /home/awipsadm/install
./AWIPScheckout.sh
```

   B. Using the output (either from the screen, printer, or file), verify the following items. If you run into a problem, call the NCF.

      1. **Verify connectivity to all machines.**
         Output should be: *as1 as2 ds1 ds2 ws1-<site> ws2-<site>* etc.
         If you do not see the LDAD server (ls1) or other workstations responding, please check the non-responding system(s).

      2. **Check Swap Packages.** The system should be in "normal" operation with no swap packages failed over.

         Output should be: *All packages on primary*

         If all packages are not on primary or enabled, please check and correct the appropriate packages.

      3. **Check Release ID.** The Release ID must be either 5.2.2.1 or 5.2.2.2.

      4. **Check localization variables.** Verify that the site is localized correctly. Output should list your SITE_TYPE, FXA_LOCAL_SITE, FXA_INGEST_SITE, FXA_LOCAL_TZ, NODE (on WFO only), and the current satellite feed.

      5. **Check for unsuccessful localizations.** If your site has performed an unsuccessful localization, a file called **.unSafe** was written to **/awips/fxa/data/localizationDataSets/LLL** on DS1. If this file exists, it must be deleted before the install begins.

         Output should be: *no .unSafe file detected*

         If an .unSafe file exists, you must manually delete it.

6. **Check IFPS version (applies to WFO type systems only).** If your site is a WFO system, the script will display the latest version you have installed.

   An example of the output is below:

   rap_name *rap_version install_time*

   IFPS12.3 *12.3 2003_02_11 14:20:48*

   The last entry is the IFPS version most recently installed on your system, which in this example, is 12.3. **You must have at least IFPS12.3 in order to install the AWIPS OB1 Release.**

7. **Check partition sizes.** It is important that you verify that the system has an appropriate percentage of disk space available on each server and workstation before you perform the OB1 install. If disk space is not reduced to the recommended percentage, parts of the install could fail for lack of needed space. **For the OB1 release, most partitions should be no more than 85% used.** The output from this section, if any, will list partitions that will need to be reduced. There is also a separate file, /home/ncfuser/**AWIPScheckout<timestamp>.bdf**, that lists all partitions and space used. This file can also be used for further reference. The following list specifies the maximum used space:

   For DS1, DS2, AS1, AS2, and all workstations
   A. "/" (root) file system should be no more than **85%** used.
   B. "/awips/hydroapps" should be no more than **85%** used.
   C. "/awips/adapt" should be no more than **85%** used. (WFO only)
   D. "/awips/fxa" should be no more than **85%** used.

   For LS1
   A. "/var" should be no more than **85%** used.
   B. "/ldad" should be no more than **85%** used.

   If you need to reduce space, try to delete or move duplicate files, core files, and files from previous releases. You should also check for old backup subdirectories and files and remove them. You might also consider moving files such as locally acquired satellite and grids into the "/data/local" subdirectory.

   If "/awips/fxa" is above the allowable percentages **on the servers (ds1, ds2, as1, as2),** you can login as root to the appropriate server, and then run the commands in the following box to reduce space. (*This script will*

delete some localization files that are not needed on the servers. If you run the script, you might see some 'cannot stat' or similar type errors. You can ignore these.)

```
export FXA_HOME=/awips/fxa
.  /awips/fxa/readenv.sh
/awips/fxa/bin/cleanup_localization.sh
bdf /awips/fxa
```

8. **Check localization files.** During the OB1 installation, a full localization will be run on ds1 and then the results will be pushed out to the other servers and workstations. As a consequence, you might get unsatisfactory results if you have different localization files on each system. You should review the **/home/ncfuser/AWIPScheckout<date>.localfiles** and make any necessary changes. In addition, localization scripts choose files from directories in a certain order of preference:

   A. /data/fxa/customFiles/<filename>
   B. /awips/fxa/data/localization/<site_id>/<site_id>-<filename>
   C. National templates under various directories (e.g., /awips/fxa/data)

   Therefore, you should also check to ensure that your intended active file is not overridden by an identically named file in a higher priority directory. You may wish to consult with you on-site localization expert for more information.

9. **Check informix status.** Verify that your Informix server is primary, online and replicating.

10. **Verify the model of the DS.** The model of the DS should be output in this section. You will use this information when you are loading each cd during the installation.

11. **Configuration information for use in Part 11.** You will need this information for the ConfigureLX.sh script in Part 11, because of the RedHat image done in Part 10. **<u>You should keep the printed copy for reference when you get to part 11</u>**.

    The output should list the following:
    a. Your hostname site id in lower case
    b. IP address of your DS1.
    c. IP address of your default gateway.

6. **Installation and Customization Automation Tool (ICAT) *Optional*** This tool was assembled in order to assist in preserving site customizations across AWIPS upgrades. ICAT identifies customizations made to *selected* configuration files and restores those local customizations after the upgrade. If you decide that you want to use this tool, please read Attachment "e" for important information and also the document entitled **ICAT User's Manual for AWIPS Release OB1** that was included with your install package.

7. **Manual file backup information.** Even if you use ICAT, certain customized files that are not handled by ICAT should be saved off manually. These include the following:

   - Customized awipsusr crons on any workstations should be saved to a safe directory.
   - Customized local rps lists in /data/fxa/radar/lists. Various rps lists in /data/fxa/radar/lists will get recreated during radar localization. You may wish to save a backup copy in /data/fxa/rps-lists if you have customized changes.
   - Secure a good LDAD backup a week or so before the upgrade. Use System Administration Note 12 entitled "LDAD Backup and Restore Procedure." This document, when finalized and signed, will be placed on the following web page: http://www.oso3.nws.noaa.gov/awips_new.htm

8. **Automatic file backup and restore information.** Unless told otherwise, the following lists files from each part of the installation that are automatically backed up and restored during the installation. However, you may wish to manually back up other files that are specifically stated that they will not be saved off.

   - In Part 2, Install Release OB1 LDAD Software:

     The /ldad/data/Menu.mb.OB1bsln file will not be activated during the upgrade. Sites do not need to activate the file after the upgrade but they may want to read the release note about the file when they have time.

     The R5.2.2 versions of files mentioned in Attachment "a" section B, will be saved off to /px2data/BACKUPLDAD522 by the script called installLDADOB1. The OB1 versions of these files will become operational.

   - Part 3, MSAS

     MSAS files listed in Attachment "a," part C will be updated. The replaced files will be saved to /data/fxa/BACKUPMSAS522.

File /awips/fxa/ldad/MSAS/fslparms/sysdef.txt.bslnOB1 will need to be activated after the OB1 upgrade. This will be done in part 14. The R5.2.2 version of the sysdef.txt file will remain active until procedure 2 in part 14 is completed.

- Part 4, OB1 Pre-install nothing will be saved off.

  During the OB1 upgrade, the crontab files (listed below) on the DS1, DS2, AS1, AS2, will be replaced. Please note that the swap package crontab files will also be replaced during the upgrade.

  Important Note: A backup copy of these files will **not** be saved off. You may wish to backup these yourself.

  /var/spool/cron/crontabs/informix
  /var/spool/cron/crontabs/ifps
  /var/spool/cron/crontabs/ldad
  /var/spool/cron/crontabs/root
  /var/spool/cron/crontabs/fxa

- In Part 5, Install Release OB1 ADAPT Software:

  Files in the following will get saved off then restored automatically:

  /awips/adapt/data

- In Part 6, Install Release OB1 Hydrology Software

  NOTE: **RFC** type systems will see the following HP/Linux type questions which they need to answer.

  Remember that R22.0 is being delivered in OB1. When RFC sites answer the following questions, a "y" means copy back your pre-OB1 version instead of keeping the delivered R22.0 version.

  Do you want to replace Linux nwsrfs with saved off version (y/n)
  Do you want to replace Linux ffg with saved off version (y/n)
  Do you want to replace Linux verify with saved off version (y/n)
  Do you want to replace Linux xdat, xnav, and xsets R20.0 with saved off version
  Do you want to replace HP grib with saved off version (y/n)
  Do you want to replace HP nwsrfs with saved off version (y/n)
  Do you want to replace HP ffg with saved off version (y/n)
  Do you want to replace HP send_rfc with saved off version (y/n)
  Do you want to replace HP verify with saved off version (y/n)

Do you want to replace HP xdat, xnav, and xsets with saved off version

- In Part 7, Install NMAP.

  The oldest version of NMAP (located in $NMAP_DIR/old) will be removed. The current version will be moved to $NMAP_DIR/old. The OB1 version will be installed in $NMAP_DIR/current.

- In Part 8, FXA/System Software, no files will be saved off.

- In Part 9 OB1 post install, no files will be saved off.

- In Part 10 and 11, OB1 install on Linux workstations LX1/LX2

  In part 0, step 16, the **/Backup_LX.sh** script will save off several file/directories under /awips/fxa, as well as GFESuite at a WFO. The script will save off: awipsusr, LDAD, fxa_users, .env files, readEnv, and informix.

  The site should back up other files as needed before proceeding with the LX part of the upgrade. Files in awips/fxa bin, data, informix and lib will be removed and recreated during the upgrade.

- In Part 12, Install PX Software, no files will be saved off.

- In Part 13, Install CP Software, no files will be saved off.

9. **Information for the LX1/LX2 workstations.**

   A. Sites need to remove any locally created directories in nationalData before doing the linux part of the upgrade.

   B. In OB1, as mentioned in the preface, when the "install_OB1" script runs (Part 8, **Install OB1 FXA/System Software**, at step 4A), you may also concurrently install RedHat 7.2 on LX1 and LX2. This is a time saving option in OB1.

10. A. **Information on obtaining data during the upgrade *Optional*.** Attachment "b" outlines a method for obtaining data through the WAN during your upgrade on installation day.

    B. **Information on freeware and COTS changes.** These can be found in Attachment "d".

11. CONUS RFC type systems and at all OCONUS sites the following is needed.

On CONUS RFC type systems and at all OCONUS sites, there is a problem with HPC QPF. The RFCs and OCONUS sites are not supposed to get this product so it should not be ingested or displayable at these sites. To ensure you do not get this product, check to ensure the following entries have been made. These may have been done in R5.2.2.2. If not do as follows.

A. As user FXA, go to the /awips/fxa/data/localization/<site_id>/ directory on DS1 and add, as shown below, "2567234728" to the **XXX-removeMenuItems.txt** file and add "HPCqpf" to the **XXX-inactiveGridSources.txt** file. If the RFC does not have these files, create them and add the addition to the appropriate file.

An example, in bold 15 font of the 2 files at AFC are:

AFC-removeMenuItems.txt

```
...Hazards...
Lightning
LAMP
LAMP/MOS.Forecast
lapsTools
RFC.FFG/QPE/QPF.images
Snow.images
25600
2567234728
```

AFC-inactiveGridSources.txt

```
ETA RUC AVN MRF AVN213 MRF213 NGM213 NGM202 AVN211
mesoEta212 mesoEta215 ETA212 LAMP LAMPQPF HPCqpf
```

B. Next copy these 2 files to all machines as follows where XXX is site id in capital letters:

```
cd /awips/fxa/data/localization/XXX

chmod 755 XXX-inactiveGridSources.txt   XXX-removeMenuItems.txt
chown fxa:fxalpha XXX-inactiveGridSources.txt  XXX-removeMenuItems.txt

for i in ds2 as1 as2 lx1 lx2 px1 px2 $WORKSTATIONS
> do
> rcp -p XXX-removeMenuItems.txt $i:/awips/fxa/data/localization/XXX
> rcp -p XXX-inactiveGridSources.txt $i:/awips/fxa/data/localization/XXX
> done
```

12. **Perform the Pre-install hydro procedure in Attachment "f"** At this time, all sites need to perform the hydro pre-install procedures found in Attachment "f."

13. **Alpha/beta testing of OB1.** If you have been testing alpha/beta OB1 software or patches, generally, these patches need to be removed before the OB1 upgrade.

14. Part 13, Install CP software, could take up to 3 hours to complete. Most sites will want to do this one or more days **after the rest** of the OB1 upgrade (part 1-12, 14). Should you do it on another day, it should be done Monday -Thursday during the normal support hours of 7AM to 7PM EST. To do the CP software upgrade, you will need a VGA monitor, keyboard, and a mouse. If this is installed on a different day then the rest of the upgrade, Service backup is not necessary. While the CPSBN1 is being upgraded, AWIPS fails over to CPSBN2. The reverse is true when the second CP is upgraded.

    Files you should save off:
    We suggest that you save copies of cpsbn files that have a history of requiring post-install changes. Examples are:

    /awips/data/acq_send_parms.sbn
    /awips/data/acq_wmo_parms.sbn.radar
    acq_wmo_parms.<siteid>

    OCONUS NRS sites should also save cpsbn files:

    /etc/hosts
    /etc/yp.conf

    and keep printouts of the pre-OB1 versions.

IMPORTANT

Steps 15 and 16 need the OB1 CDs to complete. It essential that you not forget to do these two steps!!!

15. **Check Delivered CDs before the upgrade to ensure they have no problems.**

    You received an install package containing 7 CDs. These names are listed below:

    a. **ADAPT, LDAD, OH, NMAP, FREEWARE**
    b. **WFOA, LAPS, NGIT UX, NGIT RT**
    c. **Linux WFO-A, Linux NGIT**
    d. **AWIPS Linux Workstation Disk Image CD (bootable) Disk 1 of 2**.
    e. **AWIPS Linux Workstation Disk Image CD (bootable) Disk 2 of 2.**

f. **AWIPS Release OB1 CP CD Image, Red Hat 7.2 Disk 1 of 2.**
g. **AWIPS Release OB1 CP CD Image, Red Hat 7.2 Disk 2 of 2.**

IMPORTANT

Examine all CDs to ensure they are physically okay. Note that the image CDs (d-g) listed above cannot be checked below. However, the main install CDs (a-c) can be tested as follows:

A We assume that you are still logged into DS1 as root. Insert the CD labeled "ADAPT, LDAD, OH, NMAP, FREEWARE" into CD-ROM drive on DS1. Verify that the /cdrom directory exists.

```
ll /cdrom
```

If it does not exist, type:

```
mkdir /cdrom
```

B Use the appropriate command to mount the CD-ROM in the root directory on DS1:

For K class server:

```
mount /dev/dsk/c3t2d0 /cdrom
```

For D class server:

```
mount /dev/dsk/c1t2d0 /cdrom
```

NOTE: If you don't remember which class server you have, type:

```
model
```

C Use the list command to ensure that you can list what is on the CD.

```
cd /cdrom
ll
```

D Un-mount the "ADAPT, LDAD, OH, NMAP, FREEWARE" CD:

```
cd /
fuser -k /cdrom
umount /cdrom
```

E Repeat steps A-D with the second CD (WFOA, LAPS, NGIT UX, NGIT RT) and finally with the third CD (Linux WFO-A, Linux NGIT).

16. **Linux Workstation Backup (must be done by all sites including RFCs)**

The procedure to will back up some lx1 and lx2 files, since the disk image will wipe all information off of the lx1 and lx2 during Part 10. You will be instructed how to restore this data in Part 11.

Note: Below (A-H), several file/directories under /awips/fxa are saved off, as well as GFESuite at a WFO. The following will be saved off:
awipsusr, LDAD, fxa_users, .env files, readEnv, and informix.

In addition, after the OB1 upgrade, you will find a subdirectory called /awips/fxa/awipsusr/.PREOB1gnome which will contain some of your pre-OB1 start up menu files.

Except where indicated above, site customizations from other directories were not be saved off and won't be brought back in, automatically, during the upgrade. Therefore, unless indicated earlier, it is better for you to save off important files and bring them back yourself, as appropriate, after the upgrade.

A. Begin as **root** on the **ds1**, and then log into **px2** as **root**. After this, issue the following command exactly as shown:

```
rlogin px2
exportfs -i -o rw,no_root_squash lx*:/px2data
```

B. Go to the lx1, and then log on as root and insert the CD labeled "Linux WFOA, Linux NGIT" into the lx1 cd drive. Then issue the following commands from lx1.

```
mount /mnt/cdrom          (Issue this command only if the CD has not already been mounted.)
cd /mnt/cdrom
script -a -f /local/install/Backup_LX.out   (Note: this and next command are the same for lx1 or lx2
./Backup_LX.sh
./stopscript
```

C. Verify the backup tar file. Note: Before you eject the CD, make sure the face cover is swung open and not blocking the cdrom drawer.

```
cd /px2data/OB1_SAVED
tar tfz SAVED_522lx1-<siteid>.tar.gz
eject cdrom
```

Note: Next, logout of lx1

D. Go to the lx2, and then log on as root and insert the CD labeled "Linux WFOA, Linux NGIT" into the lx2 cd drive. Then issue the following commands

```
mount /mnt/cdrom
```
(Issue this command only if the CD has not already been mounted.)

```
cd /mnt/cdrom
script -a -f /local/install/Backup_LX.out
```
(Note: this and next command are the same for lx1 or lx2

```
./Backup_LX.sh
./stopscript
```

E. Verify the backup tar file

```
cd /px2data/OB1_SAVED
tar tfz SAVED_522lx2-<siteid>.tar.gz
eject cdrom
```

Note: Next, logout of lx2

F. Log on to **px2** as **root** and issue the following command:

rlogin px2
```
exportfs -u lx*:/px2data
```

G. Reboot LX1 and LX2.

H. The note above mentions the files which were backed up. The site should save off other files as needed before doing the LX part of the upgrade. Files in awips/fxa bin, data, informix and lib will be removed and recreated during the upgrade.

17. This is a heads up for sites that use the local application program called "textWS enhancements (PR)." The version of this program that worked with Build 5.0, will not work appropriately, after the OB1 upgrade. Obtain updated information from normal sources.

PART 1: Install Day Procedures

1. Ensure that you did not forget to do Part 0, step 16 (**Linux Workstation Backup**). This is a critical step. If you missed the step, please go back and do it now!!!!!

2. Contact the NCF and tell them you are doing the OB1 upgrade.

3. Send a free text message to users of radar information that it will not be available during the OB1 upgrade.

4. Initiate service backup, if applicable, and advise your backup site(s) that you are beginning the OB1 installation.

5. Stop any **customized awipsuser** crons on the workstations, if applicable. Do a telnet as **awipsusr** to each applicable workstation and do a `crontab -r`

6. Terminate and exit all D2D sessions, text and graphics workstations, AWIPS applications, the CWSU LINUX applications (if applicable), and any site specific applications that run via crons on all graphic and text workstations.

   Note: If you are hosting a CWSU LINUX connection, we suggest that the CWSU log out of D2D on their end and that you unplug the wire to Port 16 on the waveswitch on your system. The latter is needed to ensure that the CWSU does not log back in, by mistake, during the upgrade.

7. Log out of AWIPS LINUX lx1/lx2 boxes.

8. If your site is a data feed to the FAA, don't forget to contact your FAA site.

9. If you are a Weather Wire uplink site, contact Dyncorp, if necessary.

10. **System Check using AWIPScheckout.sh** This script has been updated in OB1. It will perform several checks that are needed before installation. As you run the script, output will be displayed on the screen, printed out, and written to three different files for further reference. Another script, called **check_process**, will be created when you run AWIPScheckout. This **check_process** script will be used in Part 4 on the day of install.

    A. From a HP graphics workstation, log in as **root** (**not as awipsusr**), open a telnet window, and login to the DS1 as root.

    ```
    rlogin ds1
    ```

Next, change directories and run the script.

```
cd /home/awipsadm/install
./AWIPScheckout.sh
```

B. Using the output (either from the screen, printer, or file), verify the following items. If you run into a problem, call the NCF.

1. **Verify connectivity to all machines.**
   Output should be: *as1 as2 ds1 ds2 ws1-<site> ws2-<site>* etc.
   If you do not see the LDAD server (ls1) or other workstations responding, please check the non-responding system(s).

2. **Check Swap Packages.** The system should be in "normal" operation with no swap packages failed over.

   Output should be: *All packages on primary*

   If all packages are not on primary or enabled, please check and correct the appropriate packages.

3. **Check Release ID.** The Release ID must be either 5.2.2.1 or 5.2.2.2.

4. **Check localization variables.** Verify that the site is localized correctly. Output should list your SITE_TYPE, FXA_LOCAL_SITE, FXA_INGEST_SITE, FXA_LOCAL_TZ, NODE (on WFO only), and the current satellite feed.

5. **Check for unsuccessful localizations.** If your site has performed an unsuccessful localization, a file called **.unSafe** was written to **/awips/fxa/data/localizationDataSets/LLL** on DS1. If this file exists, it must be deleted before the install begins.

   Output should be: *no .unSafe file detected*

   If an .unSafe file exists, you must manually delete it.

6. **Check IFPS version (applies to WFO type systems only).** If your site is a WFO system, the script will display the latest version you have installed.

   An example of the output is below:

rap_name *rap_version install_time*

IFPS11.4 *11.4 2002_10_04 15:36:21*
IFPS12.3 *12.3 2003_01_11 14:20:48*

The last entry is the IFPS version most recently installed on your system, which in this example, is 12.3. **You must have at least IFPS12.3 in order to install the AWIPS OB1 Release.**

7. **Check partition sizes.** It is important that you verify that the system has an appropriate percentage of disk space available on each server and workstation before you perform the OB1 install. If disk space is not reduced to the recommended percentage, parts of the install could fail for lack of needed space. **For the OB1 release, most partitions should be no more than 85% used.** The output from this section, if any, will list partitions that will need to be reduced. There is also a separate file, **/home/ncfuser/AWIPScheckout<timestamp>.bdf**, that lists all partitions and space used. This file can also be used for further reference. The following list specifies the maximum used space:

   For DS1, DS2, AS1, AS2, and all workstations
   A. "/" (root) file system should be no more than **85%** used.
   B. "/awips/hydroapps" should be no more than **85%** used.
   C. "/awips/adapt" should be no more than **85%** used. (WFO only)
   D. "/awips/fxa" should be no more than **85%** used.

   For LS1
   A. "/var" should be no more than **85%** used.
   B. "/ldad" should be no more than **85%** used.

   If you need to reduce space, try to delete or move duplicate files, core files, and files from previous releases. You should also check for old backup subdirectories and files and remove them. You might also consider moving files such as locally acquired satellite and grids into the "/data/local" subdirectory.

   If "/awips/fxa" is above the allowable percentages **on the servers (ds1, ds2, as1, as2),** you can login as root to the appropriate server, and then run the commands in the following box to reduce space. (*This script will delete some localization files that are not needed on the servers. If you run the script, you might see some 'cannot stat' or similar type errors. You can ignore these.*)

```
export FXA_HOME=/awips/fxa
.  /awips/fxa/readenv.sh
/awips/fxa/bin/cleanup_localization.sh
bdf /awips/fxa
```

8. **Check localization files.** During the OB1 installation, a full localization will be run on ds1 and then the results will be pushed out to the other servers and workstations. As a consequence, you might get unsatisfactory results if you have different localization files on each system. You should review the **/home/ncfuser/AWIPScheckout<date>.localfiles** and make any necessary changes. In addition, localization scripts choose files from directories in a certain order of preference:

   A. /data/fxa/customFiles/<filename>
   B. /awips/fxa/data/localization/<site_id>/<site_id>-<filename>
   C. National templates under various directories (e.g., /awips/fxa/data)

   Therefore, you should also check to ensure that your intended active file is not overridden by an identically named file in a higher priority directory. You may wish to consult with you on-site localization expert for more information.

9. **Check informix status**. Verify that your Informix server is primary, online and replicating.

10. **Verify the model of the DS.** The model of the DS should be output in this section. You will use this information when you are loading each cd during the installation.

11. **Configuration information for use in Part 11.** You will need this information for the ConfigureLX.sh script in Part 11. When the RedHat image is installed in Part 10, the information will be gone. You **<u>should</u>** keep the printed copy for reference when you get to part 11.

    The output should list the following:

    a. Your hostname site id in lower case
    b. IP address of your DS1.
    c IP address of your default gateway.

11. Mount the "ADAPT, LDAD, OH, NMAP, FREEWARE" CD on the DS1:
Insert the Release OB1 CD into the CD-ROM drive on the DS1 and run the following commands:

A. `export TMOUT=0`

B. For K class server:

```
mount /dev/dsk/c3t2d0 /cdrom
```

For D class server:

```
mount /dev/dsk/c1t2d0 /cdrom
```

NOTE: If you can't remember which class server you have, type:

```
model
```

12. Do the following, as applicable:

You may wish to use the procedure in Attachment "b" entitled **"Optional Procedures to Obtain Data During the Upgrade VIA the WAN."** **Procedure 1** of that attachment will allow a site to display text and graphics displays via the WAN from a backup site's workstation. You can run this procedure during the upgrade, if you wish. It won't prevent you from being in service backup, but will allow you to display products and create some messages during the upgrade. **Procedure 2** in attachment "b" will allow a site via the WAN to run XNOW off a backup site's workstation and display results on one of the local sites workstations.

13. Ensure that there are no non-root users are logged into any workstations.

Use the "`who -u`" command to check this.

Before going to Part 2, ensure you have returned to the ds1 and are the root user.

PART 2: Install OB1 LDAD Software

Automatically Saved and Restored Information:

a. The files mentioned in Attachment "a" section B, will be replaced in OB1. The R5.2.2 versions of those files will be saved off to /px2data/BACKUPLDAD522 by the installLDADOB1 script.

b. There is one LDAD file not activated during the OB1 upgrade:

The /ldad/data/Menu.mb.OB1bsln file will not be activated during the OB1 upgrade. Sites do not need to activate the file after the upgrade but they may want to read the release note about the file when they have time.

Note: Please be sure you have completed the steps in Part 1 before you proceed.
Note: Non-operational sites that do not have an LDAD can skip Part 2 and proceed to Part 3.
Note: Attachment "a" contains a list of LDAD files that will be installed and activated during the OB1 upgrade.

1. Do the following:

   A. You need to prevent ASOS dialing into LDAD during OB1. To do this, turn off your dial in phone lines on your LDAD.

   B. If you have any interfaces to LDAD, stop these, as well.

2. Login to the LS1 as **root** and verify that there are no LDAD applications running in the "/usr/local" partition. To do this, do the following:

```
rlogin ls1
```

   A. Stop all local software running including ldm and samba, if it runs at your site. Use normal shutdown procedures.

      1. A typical way that many sites stop samba is to use the vi editor and edit the /etc/inetd.conf file and comment out the 3 lines that contain: smbd, nmbd, and swat. To do this, place a # at the beginning of these 3 lines. After doing this, run the following command:

```
inetd -c
```

2. To stop ldm, the following are examples of what various sites use:

```
su - ldad
ldmadmin stop
exit
```

Central Region uses:

```
su - ldm
cd /usr/local/ldm/runtime/bin
ldmadmin.in stop
exit
```

B. Disable any locally added crons which start these applications (e.g., root LDAD).

After all processes are killed, enter the **exit** command to log out of the ls1 and **return to DS1**.

3. From **DS1** as **root,** run the "installLDADOB1" script to install the LDAD software: (Sample output and error information are shown in Appendix A, page A2-1.)

```
script -a /home/ncfuser/installLDADOB1.out
cd /cdrom
./installLDADOB1      (This will take from 5 to 10 minutes.)
```

Please see note below as the script runs.

NOTE 1: If the screen can not scroll, resize the window.

4. After the script ends, type the following:

```
./stopscript
```

5. Review the script output file, "/home/ncfuser/installLDADOB1.out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error," etc.) were encountered.

If no errors occurred proceed to PART 3, otherwise contact the NCF.

PART 3: OB1 MSAS Script

Automatically Saved and Restored Information:

MSAS files listed in Attachment "a," part C will be updated. The replaced files will be saved to /data/fxa/BACKUPMSAS522.

File /awips/fxa/ldad/MSAS/fslparms/sysdef.txt.bslnOB1 will need to be activated after the OB1 upgrade. This will be done in Part 14, procedure 2. The R5.2.2 version of the sysdef.txt file will remain active til this procedure is run.

1. From **DS1 as root**, run the "installMSASOB1" script
   (Sample output and error information are shown in Appendix A, page A3-1.)

   ```
   script -a /home/ncfuser/installMSASOB1.out

   cd /cdrom

   ./installMSASOB1          (Takes about 3 minutes to run)
   ```

2. After the script ends, type:

   ```
   ./stopscript
   ```

3. Review the script output file, "/home/ncfuser/installMSASOB1.out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error," etc.) were encountered during the installation. If you see "***Not Dumped***" messages, ignore them.

If no errors occurred proceed to PART 4, otherwise contact the NCF.

PART 4: OB1 Pre-install Script

Automatically Saved and Restored Information:
Nothing will be saved off.

1. From **DS1 as root**, run the "preinstallOB1" script:
(See Appendix A, page A4-1 for sample error information and script log output.)

Note that data ingest stops when the preinstallOB1 script begins.

```
script -a /home/ncfuser/preinstallOB1.out

cd /cdrom

./preinstall_OB1          (This takes 30 to 60 minutes.)
```

See notes below.

NOTE 1: To monitor the progress of this script, open another terminal window on DS1 and use the "tail" command:

```
tail -f /home/ncfuser/preinstallOB1.out
```

NOTE 2: This step can take from 30 to 60 minutes at some sites, and up to 2 hours at others. The script will shut down all processes, clean up some old files, and install new freeware.

NOTE 3: If you see the following message you can **ignore** it:

/sbin/init.d/hdpdecode[87]: 29842 Bus error (coredump)

NOTE 4: **Below are messages you cannot ignore**. If you see them, call the NCF.

For a "**rcp command**" with files being copied to the "/**usr/local/**" subdirectory, if you see the message "***no such file or directory***" or "***no space left on device***" you **cannot ignore it.** See the log output file page A4-1 for more information on what to do.

2. After the script ends, do the following:

A. Type:

```
./stopscript
```

B. Review the script output file, "/home/ncfuser/preinstallOB1.out," to ensure that no unexpected errors (such as: "Text file busy", "fail", "error", "Device busy", and "no such file or directory," etc.) were encountered during the installation.

3. Next, **all sites** need to ensure that no stray processes are running on DS1, DS2, AS1, AS2, and the Workstations:

A. On DS1 as **root**, run the "check_process" script that was automatically created in Part 0. Type the following:

```
cd /home/ncfuser
./check_process > check_process.out
```

Note: This will take approximately 45 seconds to complete.

B. **View the "/home/ncfuser/check_process.out" file** to ensure that there are no stray processes running (which were not killed by the "preinstallOB1" script run in step 1). If stray process are detected, use "`kill <pid>`" or, if necessary, **"`kill -9 <pid>`"** to kill it (where <pid> is the process ID). See (3), below, for some acceptable processes.

(1) If, however, you see the following "oper" process running:

/awips/hydroapps/whfs/standard/bin/process_dpafiles

then you should kill it by typing:

```
/sbin/init.d/hdpdecode stop
```

(2) If, you see the following "x400mta" process running (where <site> is your site ID in lower case):

x400mta -d/usr/x400mail <site>

then you should kill it by typing:

```
/awips/ops/bin/x400mta_stop
```

(3) On the workstation you are performing the OB1 upgrade, **the following acceptable processes** may be running and **you don't need to kill them**:

xclock -padding 8 -name localclock -fg black -bg lightgray
/usr/dt/bin/ttsession -s
dtwm
/usr/dt/bin/dtsession
xterm -title Dear_Old_state -n Dear_Old_State -fg green -b
telnetd -b /etc/issue

4. Repeat the check_process step (step 3A-3B) until you verify that all applicable processes have been stopped.

5. If you haven't already done so in step 2A, run the stopscript command before you continue.

If no errors occurred proceed to PART 5, otherwise contact the NCF.

PART 5: Install OB1 ADAPT Software

Automatically Saved and Restored ADAPT Files:

Files in /awips/adapt/data will be backed up and restored.

RFCs can skip all of Part 5 (steps 1 through 3).

1. From **DS1 as root,** run the "installADAPT_OB1" script to install the ADAPT software. (Sample output and error information are shown in Appendix A, page A5-1.)

```
script -a /home/ncfuser/installADAPTOB1.out

cd /cdrom

./installADAPT_OB1    (This step can take from 5 to 20 minutes.)
```

NOTE 1: The installation script will check the site type and automatically skip this ADAPT installation for the RFC sites. The RFC sites should then go directly to Part 6.

NOTE 2: If you see the following error message, it's a problem and you should call the NCF:

Error in line 1 **Note: This is a bad error that cannot be ignored.**

2. After the script ends, type:

```
./stopscript
```

3. Review the script output file, "/home/ncfuser/installADAPTOB1out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error") were encountered during the installation.

If no errors occurred proceed to PART 6, otherwise contact the NCF.

PART 6: Install OB1 Hydrology Software

Automatically Saved and Restored Files:

For RFC sites only, there will be several installation options where the RFC can choose whether to keep their existing pre-OB1 software package or whether to install the OB1 software package during the AWIPS OB1 OHD installation. If the RFC chooses to keep their existing pre-OB1 software package, it will be saved off temporarily and then restored automatically by the OB1 installation process.

1. From DS1 as **root**, run the "installOH_OB1" script to install OH software. (Sample output/ error information are shown in Appendix A, for **WFO** see page A6 -1 to A6-5; **RFC** see A6-6 to A6-12.)

```
script -a /home/ncfuser/installOHOB1.out

cd /cdrom

./installOH_OB1
```

NOTE 1: This step will take from 10-15 minutes for a WFO site, and from 25 minutes to an hour for a RFC site.

2. **This step applies to RFC systems only.**

   A If you see the following error message, you can ignore it:

   tar: cannot stat <file type>

   B. The following questions will be asked several times. You will need to respond y or n for each one.
   Did the above command complete without error (i.e., no space left) (y/n)?

   C. There will be several installation questions with options (listed below) in which the RFC must choose whether to keep their existing OHD software or install the OB1 OHD package. For the following questions, the term "saved off version" pertains to your site files which were saved off earlier by this script.

IMPORTANT

If you answer, "**y**", below this means the RFC wants to have **their Pre-OB1 version put back** onto their system and "**n**" means the RFC wants to **keep the newly installed OB1 software which is R22.0.**

Do you want to replace Linux nwsrfs with saved off version (y/n)
Do you want to replace Linux ffg with saved off version (y/n)
Do you want to replace Linux verify with saved off version (y/n)
Do you want to replace Linux xdat, xnav, and xsets with saved off version (y/n)
NOTE: All RFC type systems will see the following HP questions:
Do you want to replace HP grib with saved off version (y/n)
Do you want to replace HP nwsrfs with saved off version (y/n)
Do you want to replace HP ffg with saved off version (y/n)
Do you want to replace HP send_rfc with saved off version (y/n)
Do you want to replace HP verify with saved off version (y/n)
Do you want to replace HP xdat, xnav, and xsets with saved off version(y/n)

3. After the script ends, do the following:

   A. Type the stop script command**.**

      ```
      ./stopscript
      ```

   B. Review the script output file, "/home/ncfuser/installOHOB1.out", to ensure that no unexpected errors (such as "Text file busy", "fail", "error") were encountered during the installation.

If no errors occurred proceed to PART 7, otherwise contact the NCF.

PART 7: Install OB1 NMAP Software

Automatically Saved and Restored Files:
The oldest version of NMAP (located in $NMAP_DIR/old) will be removed. The current version will be moved to $NMAP_DIR/old. The OB1 version will be installed in $NMAP_DIR/current.

NOTE: Only the following sites should install NMAP.
ACR, AFC, AFG, AJK, ALR, FWR, GUM, HFO, KRF, MFL, MSR, NHCR, NHCW, NHDA, NHOR, NHOW, ORN, PBP, RHA, SJU, SPCW, TAR, TIR, TUA, VRH, WNAW, WNOW, WNAR.

All other sites should skip to part 8.

1. **All sites, except those listed in the box above, should skip to part 8.**

   From DS1 as **root**, run the "installNMAP_OB1" script to install NMAP software (Sample output and error information are shown in Appendix A, page A7-1.)

   ```
   script -a /home/ncfuser/installNMAPOB1.out
   cd /cdrom
   ./installNMAP_OB1          (Takes 10-20 minutes)
   ```

2. After the script ends, do the following:

   A. Type the stop script command**.**

   ```
   ./stopscript
   ```

   Review the script output file, "/home/ncfuser/installNMAPOB1.out", to ensure that no unexpected errors (such as "Text file busy", "fail", "error") were encountered during the installation

If no errors occurred proceed to PART 8, otherwise contact the NCF.

PART 8: Install OB1 FXA/System Software

Automatically Saved and Restored FXA Files:
No files will be saved off.

1. From **DS 1** as **root**, issue the following command that will move the national data files that were downloaded from the NOAA1 server in Part 0, into the appropriate subdirectory.

```
cd /data/local/nationalData
./moveob1files.sh
```

2. Un-mount the "ADAPT, LDAD, OH, NMAP, FREEWARE" CD using the "umount" command:

   A. Ensure in all open windows, that the current directory is not "cdrom."

   B. Type the following:

```
cd /
umount /cdrom
```

   Remove the current "ADAPT, LDAD, OH, NMAP, FREEWARE" CD from the CD-ROM drive on the DS1.

3. Continuing as root on DS1, insert the "WFOA, LAPS, NGIT UX, NGIT RT" CD into the CD-ROM drive on the DS1 and run the appropriate "mount" command to mount the disc:

   For K class server:
```
mount /dev/dsk/c3t2d0 /cdrom
```

   For D class server:
```
mount /dev/dsk/c1t2d0 /cdrom
```

4. Run the "install_OB1" script to install the FXA/System software: (Sample output and error information are shown in Appendix A, page A8-1.)

   A. Type the following:

```
script  -a /home/ncfuser/installOB1.out
```

```
cd /cdrom

./install_OB1
```

Time saving feature

The install_OB1 script can take 3 hours or more to run. If you wish, while the script runs, you can go to Part 10 step 1 and install RedHat 7.2 on LX1 and LX2. However, before you do this, review notes 1 through 4, below.

After you start the install_OB1 script, see the notes below. **Do not attempt to start D2D until after the install is complete.**

NOTE 1: If the screen can not scroll during the install, resize the window and this will fix the problem.

NOTE 2: You may see some prompts for input from the user, ignore these messages. **The script will provide all needed input. This script will take 3 to 4 hours to run for 5 workstations.** If you have made a number of volume browser customizations, this script may take up to 5 hours to run.

NOTE 3: A full localization will take place on DS1. Localized results will be pushed out from the DS1 to DS2, AS1, AS2, and all workstations.

NOTE 4: Sites do not need to restart data ingest or the SIMPACTS.

As mentioned in the box above, the install_OB1 script is can take 3 or more hours to run. If you wish, while the script runs, you can go to Part 10, step 1 to install RedHat 7.2 on LX1 and LX2. For both LX1 and LX2, the RedHat upgrade (all of Part 10) will take about 1 ½ hours to complete. When done, you must return to Part 8, step 4B, below.

B. While the script runs, examine the script either by examining the screen output or using the tail command. Do this to ensure no unexpected errors occur/occurred.

5. After the "install_OB1" script ends, do the following:

A. Type:
```
./stopscript
```

B. Review the script output file, "/home/ncfuser/installOB1.out," to ensure that no unexpected errors (such as "Text file busy", "fail", "error") were encountered during the installation.

6. You can restart the application programs and site created applications stopped earlier and also enable crons which start the applications (e.g., root LDAD).

A. `rlogin ls1`

1. Restart all local software running including ldm and samba, if it runs at your site. Use normal startup procedures.

a. A typical way that many sites restart samba is to use the vi editor and edit the /etc/inetd.conf file and remove the comments from the 3 lines that contain: smbd, nmbd, and swat. To do this, remove the # at the beginning of these 3 lines. After doing this, run the following command:

```
inetd -c
```

b. To start ldm:

```
su - ldad
ldmadmin start
exit
```

Central Region uses:

```
su - ldm
cd /usr/local/ldm/runtime/bin
ldmadmin.in start
exit
```

2. You can also restart any locally added crons which start these applications (e.g., root LDAD).

B. After all processes are started, enter the **exit** command to log out of the ls1 and **return to DS1**.

7. If you didn't already do it in step 5, run the **stopscript** command.

If no errors occurred proceed to PART 9, otherwise contact the NCF.

PART 9: OB1 Post Install Script

Automatically Saved and Restored information:
Nothing will be saved off.

1. From DS1 as **root**, run the post install script:
(Sample output and error information are shown in Appendix A, page A9-1.)

```
script  -a /home/ncfuser/postinstallOB1.out
cd /cdrom
./postinstall_OB1          See notes below
```

NOTE 1: You may see some prompts for input from the user, ignore these messages. **The script will provide all needed input.**

NOTE 2: This step will take about between **10 minutes to an hour**, depending on the number of workstations. The script will initialize the software inventory.

NOTE 3: **For RFC systems**, the DPA decoder may be managed differently from site to site. The RFC site should verify that their **"site-specific"** DPA decoder setup is running. If the DPA decoder is not running, please manually re-start it.

NOTE 4: If you see the following, you can ignore it:
The ITO Message Interceptor doesn't run.

Important Note: Do not proceed to step 2 or beyond, until the script above has completed!

2. Once the script ends, the HP system is operational. Note that until you install part 11 (OB1 upgrade on linux lx1/lx2) the linux workstations will not be operational.

Sites can start the Netscape System Monitoring Window to verify the following processes and ensure the system is fully operational:

Data server ingest processes,
Application server ingest processes,
LDAD processes, and
AWIPS data status

NOTE: The Netscape Window may take 10 minutes or more to get updated. If after a reasonable time you see a problem, call the NCF.

3. Once the script ends, do the following:

   a. Type:

      ```
      ./stopscript
      ```

   b. Review the script output file, "/home/ncfuser/postinstallOB1.out", to ensure that no unexpected errors (such as "Text file busy", "fail", "error") were encountered.

   c. If in Part 1, you turned off the dial in phone lines to ASOS, reconnect them. Similarly, as needed, ensure LDAD interfaces, if touched in Part 1, are reconnected.

   d. If you provide a **CWSU** LINUX box connection to your AWIPS and unplugged the wire from Port 16 on the waveswitch as directed in part 1, step 6, **don't forget to reconnect it**.

4. Merge site changes into crontabs:

   If you find that some crontabs were replaced, don't just substitute the old ones back in! Instead, merge site specific changes into the new ones. Some baseline crontabs were replaced in OB1 to improve performance. If you don't merge your site specific changes into the new crontabs, the improvement introduced in OB1 will be lost! In addition, ensure that any changes you make to crontabs are done appropriately or you will have problems with failovers and server reboots. Check to see if you need to recover volume browser customized changes.

5. A heads up for non-operational WFO/RFCs (i.e., Regional Sites, National Centers, etc): A new FXA cron is set to have HWR and Climate products sent out over the WAN. You might want to check and disable this.

6. Various local rps lists in the data/fxa/radar/lists subdirectory were recreated during radar localization. As a consequence, if the site saved off the old local rps lists from this subdirectory in Part 0, bring them back, now.

7. If it is getting late in the day and you are close to being outside the window when NGIT support for the upgrade ends (7AM to 7PM EST), you probably should call the NGIT point of contact and get their opinion on what you should do.

8. **For RFC systems only**:

   A. As user **oper**, start the RFC specific oper cron. Also, ensure your shefdecoder is running.

B. Additional items for RFC sites to check out:

1. If not running, start the DPA radar product decoding process according to standard RFC procedures (varies among the RFCs).

2. If not running, install the "oper" user crontab according to standard RFC procedures (varies among the RFCs).

3. Make sure that each user environment gets created as in earlier releases so that:
   a. The APPS_DEFAULTS, APPS_DEFAULTS_USER, and APPS_DEFAULTS_SITE environment variables are set. APPS_DEFAULTS must be /awips/hydroapps/.Apps_defaults.

   b. The following directories are in the users PATH
   /awips/hydroapps/rfc/nwsrfs/ofs/scripts
   /awips/hydroapps/public/bin

   c. The “fun” function is set up upon login. This can be done by running:
   . /awips/hydroapps/public/bin/fun when the user logs in or creates a new window.

4. Check the HPs to ensure that a file exists so IFP can run on the Xterminals

   a. Check that either:

   /opt/hpxt/enware/xthome/fonts/hp_roman8/75dpi/fonts.alias
   or
   /opt/hpxt/enware2/xthome/fonts/hp_roman8/75dpi/fonts.alias

   exists on AS1 and AS2.

   If it does, go on to step 5. If not, continue with steps b and c below.

   NOTE: Either the ../enware or ../enware2 directory will exist on AS1 and AS2 machines (depends on the version of the Xterminals). Use the appropriate directory names in steps b and c.

b. Copy /awips/hydroapps/fonts/hp_roman8/75dpi/as.fonts.alias to the /opt/hpxt/enware/xthome/fonts/hp_roman8/75dpi or /opt/hpxt/enware2/xthome/fonts/hp_roman8/75dpi directory on AS1 and AS2.

c. Rename the file to fonts.alias in the /opt/hpxt/enware/xthome/fonts/hp_roman8/75dpi or /opt/hpxt/enware2/xthome/fonts/hp_roman8/75dpi) directory.

5. Check the symbolic links from /usr/lib/X11/app_defaults to the RFC application resource files on each workstation. There should be a link and a real file according to the following list. Recreate, if necessary, on all workstations.

   a. As needed, recreate symbolic links for all files (there should be 1) in the /usr/lib/X11/app_defaults directory to the /awips/hydroapps/rfc/nwsrfs/ens/app_defaults directory.

      There should be a link and a real file according to the following:

      /usr/lib/X11/app_defaults/espadp _>
      /awips/hydroapps/rfc/nwsrfs/ens/app_defaults/espadp

   b. As needed, recreate symbolic links for all files (there should be 1) in the /usr/lib/X11/app_defaults directory to the /awips/hydroapps/rfc/nwsrfs/icp/app_defaults directory.

      There should be a link and a real file according to the following:

      /usr/lib/X11/app_defaults/ICP _>
      /awips/hydroapps/rfc/nwsrfs/icp/app_defaults/ICP

   c. As needed, recreate symbolic links for all files (there should be 6) in the /usr/lib/X11/app_defaults directory to the /awips/hydroapps/rfc/nwsrfs/ifp/app_defaults directory.

      There should be a link and a real file according to the following:

      /usr/lib/X11/app_defaults/Delete_atoms _>
      /awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/Delete_atoms

      /usr/lib/X11/app_defaults/Forecast_Program _>
      /awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/Forecast_Program

/usr/lib/X11/app_defaults/IFP_map _>
/awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/IFP_map

/usr/lib/X11/app_defaults/NWSRFS_cant_run _>
/awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/NWSRFS_cant_run

/usr/lib/X11/app_defaults/Set_dates _>
/awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/Set_dates

/usr/lib/X11/app_defaults/Working_Dialog _>
/awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/Working_Dialog

d. Recreate symbolic links for all files (there should be 2) in the /usr/lib/X11/app_defaults directory to the /awips/hydroapps/precip_proc/bin directory.

There should be a link and a real file according to the following. For RFC's still using stage 3:

/usr/lib/X11/app_defaults/S3Post_res _>
/awips/hydroapps/precip_proc/bin/S3Post_res

/usr/lib/X11/app_defaults/Stage3_res _>
/awips/hydroapps/precip_proc/bin/Stage3_res

e. Example of creating a symbolic link

ln -s /awips/hydroapps/rfc/nwsrfs/ifp/app_defaults/IFP_map
/usr/lib/X11/app_defaults

6. RFCs need to check permissions as follows.

a. On DS1, check the permissions for the directories under **/awips/hydroapps/rfc/verify/output**. These should be 775.

If the permissions are not correct, you will need to fix them. Since subdirectories under "output" varies from site to site, you will need to list the subdirectories first. Next, substitute the appropriate directory name (<directory name>) and do the following:

```
cd /awips/hydroapps/rfc/verify/output
chmod 775 <directory name>
```

b. On DS1, check the permissions for the directories under **/awips/hydroapps/rfc/verify/input/verify**. These should be 775.

If the permissions are not correct, you will need to fix them. Since subdirectories under "verify" varies from site to site, you will need to list the subdirectories first. Next, substitute the appropriate directory name (<directory name>) and do the following:

```
cd /awips/hydroapps/rfc/verify/input/verify
chmod 775 <directory name>
```

9. Un-mount the "NMAP, WFOA, NGIT, LAPS" CD using following command:

A. Ensure in all open windows, that the current directory is not "cdrom"

B. Type the following as **root on DS1**:

```
cd /
umount /cdrom
```

Remove the current "WFOA, NGIT, LAPS" CD from the CD-ROM drive on DS1.

If no errors occurred, you may proceed. If you performed part 10 concurrently with part 8, please continue with part 11. Otherwise continue with part 10. If you have any problems contact the NCF.

PART 10: Install LINUX RedHat 7.2 Disk Images on LX1 and LX2

Automatically Saved and Restored information:

In part 0, when you ran the BackupLX.sh script, several file/directories under /awips/fxa were saved off, as well as GFESuite at a WFO. The saved off files/directories were: awipsusr, LDAD, fxa_users, .env files, readEnv, and informix

If there is anything else you need to save off, **do it now** before you proceed with part 10.

NOTE: Some sites may do part 10, while concurrently doing Part 8, step 4A (running script install_OB1). If you do this, you will need to go back to part 8, step 4B after completing all of part 10.

1. **Be careful with this step.** You must put the appropriate CD into **LX1**.

   In the **LX1** cdrom drive, insert the **"AWIPS Linux Workstation Disk Image CD (bootable) Disk 1 of 2."** (Note: the #1 and #2 CDs contain the RedHat 7.2 operating system and will be installed in the next step.)

2. a. Once inserted into the drive, reboot the Linux Workstation; this will automatically begin copying the disk image to **LX1**.

      NOTE: It will take 20 to 25 minutes for this CD to copy to **LX1**.

   b. When you see ***"insert media"*** on the screen, this means the first CD has been copied. Next, **insert CD #2** into the **LX1** drive and **press "OK"** to continue.

      NOTE: It will take about 20-25 minutes to copy the second CD to LX1.

      NOTE: After CD2 is finished the Linux Workstation will reboot. If you have a **Dell** workstation during boot up you will see a blue screen when it is checking hardware. When this screen appears, Hit **RETURN**, and continue hitting **RETURN** till the boot process continues (NOTE: you will need to do this about 12 times).

3. **Be careful with this step also.** You must put the appropriate CD into **LX2**.

On the **LX2** cdrom drive, insert the **"AWIPS Linux Workstation Disk Image CD (bootable) Disk 1 of 2."** (Note: the #1 and #2 CDs contain the RedHat 7.2 operating system and will be installed in the next step.)

4. a. Once inserted in the drive, reboot the Linux Workstation, which will automatically begin copying the disk image to **LX2**.

NOTE: It will take 20 to 25 minutes for this CD to copy to **LX2**.

b. When you see ***"insert media"*** on the screen, this means the first CD has been copied. Next, insert CD #2 into the **LX2** drive and press "**OK**" to continue.

NOTE: It will take about 20-25 minutes to copy the second CD to **LX2**.

NOTE: After CD2 is finished the Linux Workstation will reboot. If you have a **Dell** workstation during boot up you will see a blue screen when it is checking hardware. When this screen appears Hit **RETURN**, and continue hitting **RETURN** until the boot process continues (about 12 times.)

5. Once the 2 RedHat 7.2 disk image CDs have been installed on both LX1 and LX2:

Do either "a" or "b"

a. If you did the RedHat 7.2 upgrade concurrently with part 8, step 4A (running the install_OB1 script), **return** to **Part 8 step 4B** at this time.

OR

b. If the RedHat 7.2 upgrade was not done concurrently with part 8, step 4a, go to **Part 11**.

PART 11: Install OB1 Software on LINUX (LX1 and LX2)

Automatically Saved and Restored information:

In part 0, when you ran the BackupLX.sh script, several file/directories under /awips/fxa are saved off, as well as GFESuite at a WFO. The saved off files/directories were: awipsusr, LDAD, fxa_users, .env files, readEnv, and informix.

1. Log into the Linux workstation, **LX1**, as root (password is *root*).

2. Insert the CD Labeled "**Linux WFO-A, Linux NGIT**" on **LX1**.

3. Open a terminal window and type the following:

   A. `passwd`
   (At the prompt for the password, enter your system's root password)

   B. `mkdir /local/install`

   C. `cd /mnt/cdrom`
   `script -a -f /local/install/ConfigureLX.out`
   `./ConfigureLX.sh` **(Takes <5 minutes)**
   (Sample output and error information are shown in Appendix A, A11-1)

   As this script runs, you will need to supply information interactively. The questions asked are as follows. You obtained this in AWIPScheckout.sh (see Part 0, step 5B11).

   1. Enter your Linux workstation number [1 or 2].
      1
   2. Enter your AWIPS site id [Ex. pbx]
      abc For example
   3. Enter the IP address of your DS1:
      165.92.21.5 For example
   4 Enter the IP address of your default gateway:
      165.92.21.70 For example

   5. You will see a line with site specific information under the heading of ***"Here is your network configuration:"*** Check the information and see

if it is correct. You will see the following question which you must answer y or n for yes or no respectively.

```
hostname   --->  lx1-abc
host IP    --->  165.92.21.30
netmask    --->  255.255.255.128
broadcast  --->  165.92.21.127
ds1 IP     --->  165.92.21.5
gateway    --->  165.92.21.70
NIS domain ---> abc.awips1

Are these entries correct? [y/n]          type y if it is OK
y
```

D. Now run the following:

```
./installMGAdrivers.sh
```

Note: If you see "***can't stat***" messages, they can be ignored.

E. Type:

```
./stopscript
```

4. Reboot the Linux workstation.

```
shutdown -yr now
```

Next, log back in as **root** with your new password.

5. Re-mount the CD.

A. Type the following commands:

```
mount /mnt/cdrom
script -a -f /local/install/Restore_LX.out

cd /mnt/cdrom
./Restore_LX.sh          (this takes about as long it took to run the
                          Backup_LX script in as part 0, step 16D.)
```

(Sample output is shown in Appendix A, A11-2)

```
./stopscript
cd /
```

Note: ***Ensure the bay door is open.***

```
eject cdrom
```

B. Now logout of the system.

6. Before inserting the cd, log into the Linux workstation, **LX2**, as root (password is *root*)

7. Insert the CD Labeled "**Linux WFO-A, Linux NGIT**" on **LX2**.

8. Open a terminal window type the following:

A. `passwd`
(At the prompt for the password, enter your system's root password)

B. `mkdir /local/install`

C. `cd /mnt/cdrom`
`script -a -f /local/install/ConfigureLX.out`
`./ConfigureLX.sh` **(Takes <5 minutes)**
(Sample output is shown in Appendix A, A11-3)

As this script runs, you will need to supply information interactively. The questions asked are as follows. You obtained this in AWIPScheckout.sh (see Part 0, step 5B11).

1. Enter your Linux workstation number [1 or 2].
   2
2. Enter your AWIPS site id [Ex. pbx]
   abc For example
3. Enter the IP address of your DS1:
   165.92.21.5 For example
4 Enter the IP address of your default gateway:
   165.92.21.70 For example

5. You will see a line with site specific information under the heading of ***"Here is your network configuration:"*** Check the information and see if it is correct. You will see the following question which you must answer y or n for yes or no respectively.

   hostname ---> lx2-abc
   host IP ---> 165.92.21.30
   netmask ---> 255.255.255.128
   broadcast ---> 165.92.21.127
   ds1 IP ---> 165.92.21.5
   gateway ---> 165.92.21.70

NIS domain ---> abc.awips1

Are these entries correct? [y/n] y
Type 'y' if it is OK. Otherwise, if you accidentally typed in 1 instead of 2 for your lx box, you can reply 'n' to this prompt and rerun ConfigureLX.sh

D. Now run the following:

```
./installMGAdrivers.sh
```

Note: If you see "***can't stat***" messages, they can be ignored.

E. Type:

```
./stopscript
```

9. Reboot the Linux workstation by typing the following:

```
shutdown -yr now
```

Next, log back in as **root** with your new password.

10. Re-mount the CD.

a. Type the following commands:

```
mount /mnt/cdrom
script -a -f /local/install/Restore_LX.out
cd /mnt/cdrom
./Restore_LX.sh
./stopscript
cd /
```

Note: ***Ensure the bay door is open.***

```
eject cdrom
```

b. Now logout of the system.

11. Log on to **ds1** as **root** and mount the CD labeled "**Linux WFOA, Linux NGIT**" on DS1.

```
ll /cdrom
```

If it does not exist, type:
```
mkdir /cdrom
```

Use the appropriate command to mount the CD-ROM in the root directory on DS1:

For K class server:
```
mount /dev/dsk/c3t2d0 /cdrom
```

For D class server:
```
mount /dev/dsk/c1t2d0 /cdrom
```

NOTE: If you don't remember which class server you have, type:
```
model
```

12. Run the following to load the OB1 linux baseline software onto LX1 and LX2. The following is run from **DS1** as **root**.

```
cd /cdrom
script -a /home/ncfuser/InstallLXOB1.out
./InstallLX-PXOB1.sh          (Takes about 1 hour to run)
./stopscript
```

NOTE: While the script is working on lx1 and lx2, the system is brought down to run level 2. The screen will be in a text mode, and the screen will read:

Starting PCMCIA [OK] This remains for about 15 minutes

13. Review the script output file, "/home/ncfuser/installLXOB1.out," to ensure that no unexpected errors (such as "Text file busy," "fail," "error") were encountered.

14. As the script indicates, you must now **reboot** both **LX1** and **LX2**.

15. RFC type systems must type an additional command:

```
./fixRFClinks
```

16. Sites with IFPS (WFO type systems) **must** run the following script. This script was placed on your system during the IFPS 12.3 upgrade. On DS1 as root, type:

```
/awips/adapt/ifps/bin/linux/correct_ifps_permissions
```

17. A subdirectory will exist called /awips/fxa/awipsusr/.PREOB1gnome which contains pre-OB1 start up menu files. You may need to merge site customized files into the OB1/RedHat 7.2 files. In addition to start up files, you may need to bring back other customized information and merge these changes into the new OB1 files.

18. Unmount the cd.

```
cd /
umount /cdrom
```

19. Remove the cd.

20. LX1 and LX2 are now up and fully operational at OB1. You can log in to the LXs and start D2Ds as necessary.

    Note: In about 15 minutes, the ifpsServer will be started automatically by a cron.

    If no errors occurred proceed to Part 12, otherwise contact the NCF.

PART 12: Install PX Software

Note: This must be done on the day of the rest of the upgrade.

1. On **DS1** as **root**, type

```
script -a /home/ncfuser/InstallPXOB1.out
cd /home/awipsadm/install
./InstallPX.sh installob1     (This takes about 30 minutes to run)
exit
```

NOTE 1: The system may sit at the following message for about 10 minutes at some sites:

Relocating px1apps. Service px1apps relocated.

NOTE 2: If you are asked the following, always answer **yes**:
ERROR CONDITION EXISTS!! DO YOU WANT TO OVER-RIDE?(yes/no)

NOTE 3: If you see the following error, call the NCF/NGIT point of contact. This error cannot be ignored.

Unable to relocate PX1apps

2. A. Verify that there were no errors by reviewing the output file in /home/ncfuser.

B. **Only HFO and PQR**, need to do the following. The OB1 PX part of the Data Monitor will not work until you run as **root** on **DS1**:

```
rcp -rp /usr/local/perl/lib/site_perl px1:/usr/local/perl/lib
rcp -rp /usr/local/perl/lib/site_perl px2:/usr/local/perl/lib
```

3. Part 13 can take up to 3 hours to complete and upgrade support for OB1 is generally Monday through Thursday, 7 am to 7 pm EST. As a consequence, you may want to do part 13 on another support day. You can call the NGIT point of contact and see what they think.

Assuming you are skipping Part 13 and will do it on another support day, please be sure to go to Part 14 at this time. Do not skip Part 14!!!

If no errors occurred proceed to Part 13 or 14, as appropriate.

PART 13: Install CP Software

IMPORTANT

1. **Part 13 can be done one or more days after the rest of the OB1 upgrade. It could take up to 3 hours to complete. It should be done Monday through Thursday, between 7 am and 7 pm Eastern time.**

2. **Service backup for Part 13 should not be needed because when you upgrade one CP, AWIPS will fail over to the other.**

3. **To perform the CP upgrade, you will need a VGA monitor, keyboard, and a mouse.**

4. **In steps 4 and 12 below, you will need to move the CAT-5 cable from the 100/10 Ethernet port to the 1GbE Ethernet port.**

5. **Save copies of cpsbn files that have a history of requiring post-install changes. Examples are:**
   /awips/data/acq_send_parms.sbn
   /awips/data/acq_wmo_parms.sbn.radar
   acq_wmo_parms.<siteid>

   OCONUS NRS sites should also save cpsbn files
   /etc/hosts
   /etc/yp.conf
   and keep printouts of the pre-OB1 versions.

For cpsbn1 upgrade do the following:

1. A. If you are doing the CPSBN upgrade one or more days after the rest of the OB1 upgrade (Parts 1-12, 14), you will need to **call the NCF** and notify them that you are doing the OB1 CP software upgrade.

   B. Attach the VGA monitor, keyboard, and mouse to the back of cpsbn1.

2. From an AWIPS workstations, log into **as1** as **root** and run the following script. If you have a problem executing the script, call the NCF.

```
/awips/ops/bin/CP_Reconfigure
```

When you run CP_Reconfigure, you will get the following menu:

CP Reconfiguration Menu:

1. Spare the GOES channel
2. Spare the NWSTG channel
3. Spare the NEXRAD
4. Return all devices to primary configuration
5. Return the GOES to primary configuration
6. Return the NWSTG to primary configuration
7. Return the NEXRAD to primary configuration
8. Display cp configuration
9. Re-init cp configuration
a. Spare the alternate GOES channel
b. Spare the 4th channel
c. Return the alternate GOES channel to primary configuration
d. Return the 4th channel to primary configuration
q. Quit this program.

NOTE: In the following instructions when you select the choices given, you will swap the NWSTG channel to CPSBN2 and then upgrade CPSBN1. After CPSBN1 is finished upgrading, you will swap the GOES channel to CPSBN1 and upgrade CPSBN2.

Select the appropriate choice:

A. **For CONUS sites:**

Select option **2**. (Spare the NWSTG channel)

Go to the comms rack and ensure the VIR switch for CPSBN1 switched from "A" to "B." If it did not, call the NCF before continuing to the next step.

B. **For OCONUS sites:**

Note that the original VIR switch settings were:

sw1 - LED 'A' is green. (leftmost switch)	(NWSTG)
sw2 - LED 'B' is red.	(GOES)
sw3 - LED 'A' is green.	
sw4 - LED 'A' is green.	(OCONUS)

NOTE: After you do the following options from the CP Reconfiguration Menu, you want sw1 (NWSTG) and sw3 and sw4 (OCONUS) to be switched to "B".

Select option **2** (Spare the NWSTG channel)

Go to the comms rack and ensure the VIR switch sw1 for CPSBN1 switched from "A" to "B." If it did not, call the NCF before proceeding to the next step.

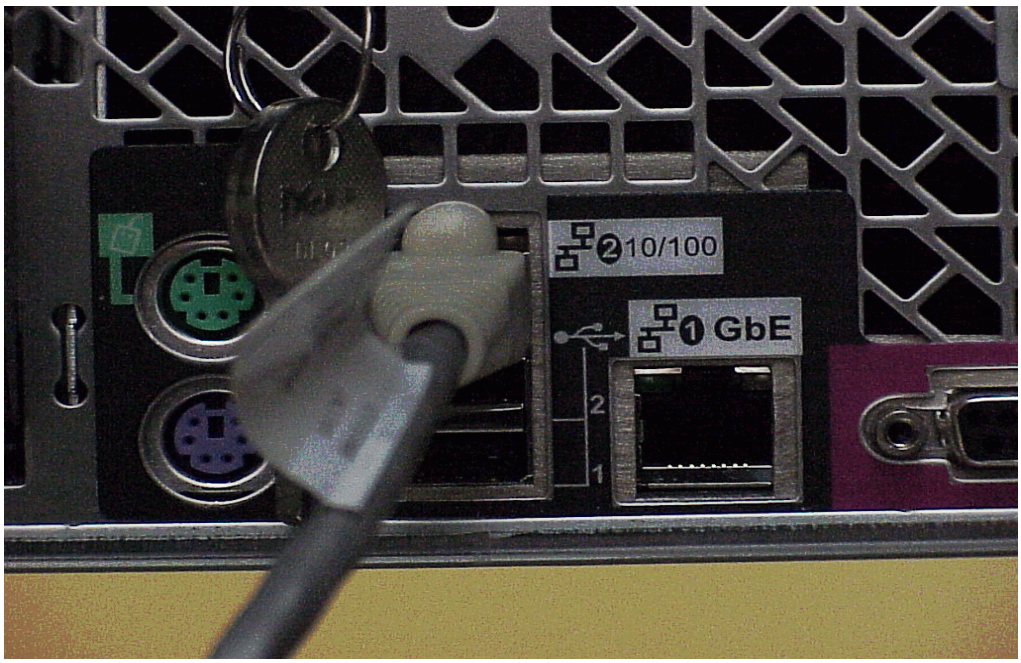
1. Next, re-run:
   `/awips/ops/bin/CP_Reconfigure` and

2. Select option **b**. (Spare the 4th channel)
   Go to the comms rack and ensure the VIR switch sw3 and sw4 for CPSBN1 switched from"A" to "B."

   Periodically monitor the system to verify that data is being ingested and processed properly after the failover. Call NCF if there are problems.

3. From the **cpsbn1** log in as **root**. Insert CD #1 entitled **"AWIPS Release OB1 CP CD Image, RedHat 7.2 disk 1 of 2"** into the CD-ROM Drive.

4. Move the CAT-5 cable from the 100/10 Ethernet port to the 1GbE Ethernet port.



5. Next, reboot **cpsbn1**. A good way to do this is to type:

```
shutdown -r now
```

As the system boots, you will be asked to "*Mark these drives as usable in Ghost*."

Press **Enter** to select the OK button.

The Disk Image will start to load automatically. Insert CD #2 entitled **"AWIPS Release OB1 CP CD Image, RedHat 7.2 disk 2 of 2"** when instructed. After CD #2 is done loading the **cpsbn1** will automatically reboot. Note that you should not remove CD #2 until step 8. Also, Ignore any "FAILED" message during boot.

NOTE: During reboot, some sites **may** see a Kudzu hardware discovery utility dialog box. At the first screen press the <Space Bar>. At the second screen press <F4>.

6. After the **cpsbn1** has rebooted, log into the **cpsbn1** as **root** (the password is "linuxcp!") and run the following:

```
grub-install /dev/sda2

cd /awips.install

./start_newhost
```

A. This script will prompt you for the hostname of the CP you are configuring. So when prompted enter cpsbn1-<siteID> where siteID is your three letter site id.

B Answer "**y**" or press [**ENTER**] for "yes" and "**n**" for "no" when you see the following:

Verify Configuration SITE ID.
Are these OK continue (yes(CR), no)?

NOTE: Do not type "yes" or "no" to the question only "**y**" "**n**" or press [**ENTER**]

Once the script is complete the network interface should be configured and available.

OCONUS NRS Sites: Verify network access. rlogin from cpsbn1 to ds1 and then rlogin from ds1 to cpsbn1. The login and password prompts should appear fairly quickly (within 10 seconds). If successful, exit the remote login sessions and return to the local cpsbn1 session. If network problems occur, call NCF before proceeding to the next step. Keep a copy of **/etc/hosts** and **/etc/yp.conf** available for comparison with the new versions, as these files may be the cause of network problems.

All sites be sure to change the **cpsbn1** password to the site's root password if desired, otherwise the default root password will be "linuxcp!".

7. From an AWIPS workstation log into **ds1** as **root** and run the following:

```
/home/awipsadm/install/Update_LinuxCP
```

8. From the **cpsbn1** remove CD #2 from the CD-ROM drive.

```
cd /

eject cdrom

reboot
```

Watch for any errors during boot up. The CP should now be fully configured and ready for operational use.

For cpsbn2 upgrade do the following:

9. De-attach the VGA monitor, keyboard, and mouse from **cpsbn1** and attach them to **cpsbn2**.

10. From an AWIPS workstations log into **as1** as **root** and run:

```
/awips/ops/bin/CP_Reconfigure
```

When you run CP_Reconfigure, you will get the following menu:

CP Reconfiguration Menu:

1. Spare the GOES channel
2. Spare the NWSTG channel
3. Spare the NEXRAD
4. Return all devices to primary configuration
5. Return the GOES to primary configuration
6. Return the NWSTG to primary configuration
7. Return the NEXRAD to primary configuration
8. Display cp configuration
9. Re-init cp configuration
a. Spare the alternate GOES channel
b. Spare the 4th channel
c. Return the alternate GOES channel to primary configuration
d. Return the 4th channel to primary configuration
q. Quit this program.

A. **For CONUS sites:**

Select option **6** (Return the NWSTG to primary configuration)

Go to the comms rack and ensure the VIR switch for CPSBN1 switched from "B" to "A." If it did not, call the NCF before proceeding to the next step.

1. Next, re-run:

   `/awips/ops/bin/CP_Reconfigure` and

2. Select option **1**. (Spare the GOES channel)

   Go to the comms rack and ensure the VIR switch for CPSBN2 switched from "A" to "B." If it did not, call the NCF before proceeding to the next step.

B. **For OCONUS sites:**

At this point, the VIR switch settings on CPSBN1 are:

sw1 - LED 'B' is green. (leftmost switch)	(NWSTG)
sw2 - LED 'B' is red.	(GOES)
sw3 - LED 'B' is green.	
sw4 - LED 'B' is green.	(OCONUS)

Select option **6** (Return the NWSTG to primary configuration)

Go to the comms rack and ensure the VIR switch sw1of the CPSBN2 switched from "B" to "A." If it did not, call the NCF before proceeding to the next step.

1. Next, re-run:
   `/awips/ops/bin/CP_Reconfigure` and

2. Select option **1** (Spare the GOES channel)

   Go to the comms rack and ensure the VIR switch sw2 for CPSBN1 switched from "B" to "A." If it did not, call the NCF before proceeding to the next step.

   A. Next, re-run:
   `/awips/ops/bin/CP_Reconfigure` and

   B. Select option **d**. (Return the 4th channel to primary configuration)
   Go to the comms rack and ensure the VIR switch sw3 and sw4 for CPSBN2 switched from "B" to "A."

   Periodically monitor the system to verify that data is being ingested and processed properly after the switch. Call NCF if there are problems.

11. From the **cpsbn2** log in as **root**. Insert CD #1 entitled **"AWIPS Release OB1 CP CD Image, RedHat 7.2 disk 1 of 2"** into the CD-ROM Drive.

12. Move the CAT-5 cable from the 10/100 Ethernet port to the 1GbE Ethernet port in the same manner as you did in step 4.

13. Next, reboot **cpsbn2**. A good way to do this is to type:

```
shutdown -r now
```

As the system boots, you will be asked to "*Mark these drives as usable in Ghost*"

Press **Enter** to select the OK button.

The Disk Image will start to load automatically. Insert CD #2 entitled **"AWIPS Release OB1 CP CD Image, RedHat 7.2 disk 2 of 2"** when instructed. After CD #2 is done loading the **cpsbn2** will automatically reboot. Note that you should not remove CD #2 until step 16. Also, Ignore any "FAILED" message during boot.

NOTE: During reboot, some sites **may** see a Kudzu hardware discovery utility dialog box. At the first screen press the <Space Bar>. At the second screen press <F4>

14. After the **cpsbn2** has rebooted, log into the **cpsbn2** as **root** (the password is "linuxcp!") and run the following:

```
grub-install /dev/sda2
cd /awips.install
./start_newhost
```

A. This script will prompt you for the hostname of the CP you are configuring. So when prompted enter cpsbn2-<siteID> where siteID is you three letter site id. Once the script is complete the network interface should be configured and available.

B Answer "**y**" or press [**ENTER**] for "yes" and "**n**" for "no" when you see the following:

Verify Configuration SITE ID.
Are these OK continue (yes(CR), no)?

NOTE: Do not type "yes" or "no" to the above question only "**y**" "**n**" or press [**ENTER**]

OCONUS NRS sites: Verify network access. rlogin from cpsbn2 to ds1 and then rlogin from ds1 to cpsbn2. The login and password prompts should appear fairly quickly (within 10 seconds). If successful, exit the remote login sessions and return to the local cpsbn2 session. If network problems occur, call NCF before proceeding to the next step. Keep a copy of the pre-OB1 /etc/hosts and /etc/yp.conf available for comparison with the new versions, as these files may be the cause of network problems.

All sites should change the **cpsbn2** password to the site's root password if desired, otherwise the default root password will be "linuxcp!".

15. From an AWIPS workstation log into **ds1** as **root** and run the following:

```
/home/awipsadm/install/Update_LinuxCP
```

16. From **cpsbn2**, remove CD #2 from the CD-ROM drive and reboot the CP.

```
cd /
eject cdrom
reboot
```

Watch for any errors during boot up. The **cpsbn2** should now be fully configured and ready for operational use.

---

17. After you have loaded both cpsbn1 and cpsbn2, from an AWIPS workstation log into **as1** as **root** then type:

```
/awips/ops/bin/CP_Reconfigure
```

For ALL sites: Select option **4**. (Return all devices to primary configuration)

Go to the comms rack and ensure the VIR switch for CPSBN1 switched from "B" back to "A" and that CPSBN2 switched from "B" to "A." This may take about 2 minutes. If it did not, call the NCF before proceeding to the next step.

This will restore the normal data input configuration to the reloaded CP's.

18. Detach the VGA monitor, keyboard, and mouse from the cpsbn2.

If no errors occurred proceed to Part 14, if appropriate. If you finished Part 13 on a day different than Parts 1-12, and 14, you are done with the OB1 upgrade.

PART 14: OB1 After-Install Procedures

The following procedures **MUST** all be completed as part of the OB1 upgrade. Procedures 1- 7 must be run on the day of the install, if applicable:

1. Merge/Update of LDAD Files
2. Merge/Update of MSAS file
3. OH Post install Procedures
4. Maintenance Release(s) for OB1
5. Miscellaneous Post install procedures
6. GOES-12 related procedures, (do on day of upgrade)
7. Run Post Install ICAT (Optional)
8. Secure a Good Level 0 Archive as a Backup
9. Secure a Good LDAD Backup
10. Checking DS Server Failover Configuration

Procedures 8 - 10 need to be done...but not on the day of the upgrade. They can be done within a week or so after the rest of the upgrade.

1. Merge/Update of LDAD Files (must be done on day of upgrade):

A. Alaska Region Only needs to do step A

This is a Post Install procedure for LDADinfo.txt and is only required for sites ingesting the Alaska Profiler data. For sites receiving Alaska Profiler Data through LS1:

1. On **DS1** as **ldad**,
   a. Add the following line to /awips/fxa/data/LDADinfo.txt:

      jnuProfiler |JNU | 88 | 0 |PROFILER |profiler | null

   b. Copy the change above to DS2 as **ldad**:

      rcp /awips/fxa/data/LDADinfo.txt ds2:/awips/fxa/data/LDADinfo.txt

2. Make sure that "jnuProfiler" is part of the pattern in the files being put into ls1:/data/Incoming. If the pattern is different:

   a. You will need to modify the above "jnuProfiler" line in "1a and 1b" above then:
   b. Update your ds1:/awips/fxa/ldad/data/LdadPatterns.txt file then copy the LdadPatterns.txt file to DS2 as follows:

rcp /awips/fxa/data/LdadPatterns.txt ds2:/awips/fxa/data/LdadPatterns.txt

3. Once the new files are updated restart ldad, as follows:

   a. As **ldad**, type:
   ```
   StopLDAD.sh
   ```

   b. Then type:
   ```
   startLDAD.csh
   ```

B. If the baseline OB1 files listed in Attachment "a" section B are acceptable, because you did not make customized changes to any of them, you can skip the rest of this section.

After installing OB1, as needed, merge site-specific changes from your R5.2.2 version of these or other files listed in Attachment "a" section B into the new ROB1 files. Follow steps 1-5, below, to perform the changes and activate the modifications.

1. Login to DS1 as user **ldad**.
   (Note that for ls1 files, you will need to login to ls1 as the ldad user).
   (Note that for AS1 files, you need to login to AS1 as the ldad user).

2. As needed, merge your customized changes from the R5.2.2 file into the OB1 file. The "diff" command may help you find the changes. Use the vi editor to merge in these changes:
   ```
   vi /awips/fxa/ldad/data/example.pl
   ```

3. Copy the updated OB1 file to DS2 to ensure that you don't have problems during fail-overs. (Note: for ls1 files, don't copy to ds2.) (Note: Locally edited files on DS1 [AS1], should be copied to DS2 [AS2]).

4 Repeat the steps above, for other activated files which need customized changes merged into them.

5. Once modifications have been made, do the following to restart LDAD:
   ```
   cd /awips/fxa/ldad/bin
   StopLDAD.sh
   startLDAD.csh
   ```

2. Merge/Update of MSAS Files (must be done on day of upgrade):

Post Install procedures are as follows (for MSAS):

A. `rlogin as2`
B. `cd /awips/fxa/ldad/MSAS/fslparms`

C. Do a "diff" and merge into /sysdef.txt.OB1bsln any site specific changes from the R522 sysdef.txt file, which is still operational at this point.

D. After merging is done put the OB1 file into place. Type:

`cp sysdef.txt sysdef.txt.PreOB1`	Save off R522 file
`cp sysdef.txt.OB1bsln sysdef.txt`	Put the file into place

3. OH Post install Procedures (must be done on day of upgrade):

A. All WFO systems **must** do the **post-install procedure** found in **Section A and B** of Attachment "g," *OB1 OHD Post Install Instructions*

B. All RFC systems **must** do the **post-install procedure** found in **Section A and C** of Attachment "g," *OB1 OHD Post Install Instructions*.

4. Maintenance Releases for OB1 (must be done on day of upgrade)

This is a reminder that any maintenance releases to OB1 should be installed on the day of the upgrade, as appropriate.

The web page with AWIPS software and Maintenance Release information is found at:
http://www.ops1.nws.noaa.gov/awips_softwre.htm

5. Miscellaneous Post install procedures (must do on day of upgrade)

A. Sites that receive data through LDAD and distribute it on the SBN need to look at the following.

A new LDADWmoID.cfg file was delivered on ds1 in awips/fxa/data. The previous version of this file was renamed LDADWmoID.cfg.preob1.

1. Products coming in through LDAD can be sent out in shef format with a specified WMO header across the SBN. If your site does this, you need

to examine the new LDADWmoID.cfg file and make appropriate changes.

2. If you update the LDADWmoID.cfg file in step 1, place the updated version on ds2.

```
rcp /awips/fxa/data/LDADWmoID.cfg \
ds2:/awips/fxa/data/LDADWmoID.cfg
```

B. **OB1 WWA Template Updates**

Four template files were delivered in OB1 and are found in /awips/fxa/data/localization/nationalData. The first two are new HWO template files:

1. WWA_hazard_outlk.preWWA

2. nwr_hazard_outlk.preWWA

The final two files are new WCN template files:

3. WWA_svrt_wat_wcn.preWWA

4. WWA_tor_wat_wcn.preWWA

For sites using template files located in the /data/fxa/customFiles subdirectory on ds1, you will need to copy the new files above into customFiles and merge site specific/local configuration changes into them.

Remember that after any template file changes are made, it is necessary for you to run a WWA localization on lx1 and lx2.

C. **Mercator Projection for specified OCONUS sites**

Sites effected: Sites with IFPS prior to IFPS 13 being installed and only those sites that want Mercator Projection (Pacific and Alaska Regions).

Note that **setenv IFPS_SITE_MAP_PROJ** equal to “2" for a Mercator projection, “3" for Sterographic protection, and "4" for LATLON. If this environment variable is not set explicitly, it will default to the value “1" for the Lambert projection.

Launch the WWA tool again and notice that the maps are displayed in the various projections. View the WWA Geoviewer for all four options.

From the command line:

Type: setenv IFPS_SITE_MAP_PROJ 2
Type: setenv IFPS_SITE_MAP_PROJ 3
Type: setenv IFPS_SITE_MAP_PROJ 4
Type: setenv IFPS_SITE_MAP_PROJ 1

D. **Marine Settings**

Sites affected: Those sites that use marine functionality from WWA should do the following procedure. These instructions are completed after you have configured the IFPS Marine functionality so the WWA maps are correct.

1) Make a marine hazard selectable in the WWA Composer. This can be done by opening wwa_setup, editing the marine hazard entry, and by clicking on "Create in Composer".

2) Allow the marine zones to be "selectable" in the WWA Geoviewer. Also within the wwa_setup program, while editing the marine hazard entry, or any other entry you wish to format marine zones for, you need to add "marine_zone_dfm" to Geography Lists boxes. For example, if you wanted to be able to select marine zones in your Winter Storm Watch product, then you would open this hazard in wwa_setup, and under Geography Lists add the list to the existing lists to get something like "cwa_z, cwa_c, marine_zone_dfm". Do this for all 4 life cycle boxes and you will be able to select/deselect public and marine zones for the Winter Storm Watch. If you only wish to select marine zones, then "marine_zone_dfm" is the only entry you need to have in these boxes.

3) Note that there is no radio button in the wwa_setup GUI for a UGC type of "Marine". To format marine products, make sure the "Zone" UGC type is selected.

4) Modify the text templates so that marine zones can be formatted in the final text. The national template files for marine products have already been modified. But anywhere else you need to, add the following line to the UGC section of the text template in order to print a marine UGC code:
<AREA |file=wwa_marine | output_field=3 | area=wwa_marine|format=ugc>

The following line will print the marine zone names:
<AREA |file=wwa_marine | output_field=1 >

E. All CONUS WFO'S and Alaska WFO'S need to do the following.

On DS1 as root type:

```
cd /data/fxa_local/laps
mv laps_geog ../
```

F. Iconification issue on the LXs:

A few of the OB1 sites are reporting that when they iconify something on the Linux Workstation it disappears. It is not disappearing. It is still there you just can't get to it from the desktop. In order for the site to be able to get to the aplications after they are iconified, the following can be done.

On the LXs, log in as **awipsusr**, then

1) On the system menu (the one that looks like a foot) select "Applets";
2) Next, select "Utility", and
3) Finally, select "Tasklist".
   The iconified programs will be listed on the Task Bar.

G. All sites must do the following. This is needed because some files were not copied to DS2 during the OB1 upgrade.

As **root** on **ds1** type:

```
rcp /awips/fxa/ldad/bin/*  ds2:/awips/fxa/ldad/bin
rcp -r /awips/fxa/ldad/lib/*  ds2:/awips/fxa/ldad/lib
```

6. GOES-12 related procedures

A GOES-12 Procedure if GOES-12 has not been activated yet:

The following are GOES-12 steps to be taken after the OB1 install.

If GOES-12 has not been activated for your site, most sites will have to take no special GOES-12–related steps at the time of your OB1 install.

The **only exception** to this is if your site is using site-local custom files to modify or enhance the D-2D satellite menu options. Such modifications/enhancements are evidenced by the presence of the following file:

/data/fxa/customFiles/<site ID>-satDataMenus.txt

If this file exists at your site, it should be deleted after its contents are copied to the following two files:

/data/fxa/customFiles/<site ID>-ijklSatDatamenu.txt

/data/fxa/customFiles/<site ID>-mnopqSatDatamenu.txt

After such custom files have been created (again, only if necessary), the workstations can be relocalized for the OB1 install.

B GOES-12 Procedure if it has been activated at your site:

If GOES-12 has been activated for your site, then a new version of /data/fxa/nationalData/GOESImagerInfo.txt will have to be installed prior to relocalizing your workstations. This file will be used by the localization process in order to select the correct D-2D satellite menu file (i.e., either ijklSatDatamenu.txt or mnopqSatDatamenu.txt). Before the activation of GOES-12 (as GOES East), the GOESImagerInfo.txt file should begin as follows:

EAST	1
WEST	1
CENTRAL	3

After the activation of GOES-12 as GOES East, the GOESImagerInfo.txt file should begin as follows:

EAST	2
WEST	1
CENTRAL	3

7. Run Post Install ICAT (Optional)

If you ran pre-install ICAT in Part 0, step 6 (Installation and Customization Automation Tool (ICAT)) before the upgrade, you can now **run post-install ICAT.** See the attached ICAT document for instructions and make sure you read the **important note** below before proceeding. "Post-install ICAT" copies the files created by pre-install

ICAT into their runtime locations, and identifies any localization tasks that need to be run. Once re-localized, sites can resume operations.

VERY IMPORTANT

ICAT has a feature which allows you to **examine** each OB1 file generated by "pre-install ICAT." This is found in **Pre-install ICAT, step 5**. Use it!!!

It is **essential** that you carefully examine each ICAT generated file using this feature to ensure the ICAT merged changes are good. Now that after the upgrade is completed, if you see that an ICAT generated file is not correct, you can edit the file by hand and let post install ICAT copy this file into place. **Do not assume that the ICAT created file is perfect....ICAT is a useful tool but is not infallible!!!!**

After the OB1 upgrade, you **cannot** re-run the pre-install ICAT except for step 5.

The following is useful information that is also found in the ICAT manual:

A. To monitor pre-install ICAT activities and results, a **log file** is created. It is located in the **/awips/fxa/data/localization/ICAT/Work/*hostname*** directory on the server or workstation where ICAT was just run. To view the file, type:

more /awips/fxa/data/localization/ICAT/Work/*hostname*/log
where *hostname* is the hostname of the server or workstation.

B. The files that pre-install ICAT creates are found in**:**
/awips/fxa/data/localization/ICAT/Work/hostname/rt_out.

C. Backups of the operational R5.2.1 files examined by ICAT are located in:
/awips/fxa/data/localization/ICAT/backup-5.2.1/hostname.

D. In Post-Install ICAT, after step 8, you find is a procedure entitled "**Restoring Files to the Baseline."** Use this to restore OB1 baseline files for the following:
   1. You completed the OB1 upgrade **and**
   2. You are "activating" at least some of the ICAT generated files using post-install ICAT. ("Activation" means your ICAT generated files were copied into their operational locations by post-install ICAT) **and**
   3. You decide you don't like the results of the "activated" ICAT created changes on your system and want to restore the appropriate OB1 baseline files.

If you use this procedure, don't forget to merge site changes in by hand afterward!

NOTE: At this point, you can call the NCF and notify them that you have completed the OB1 upgrade and they can close the trouble ticket.

NOTE: Do Procedures 8–10 within a week after the upgrade

8. Secure a Good Level 0 Archive as a Backup

As soon as possible after the upgrade, secure a good level 0 archive as a backup. Since the OB1 software is not compatible with any previously saved level 0 archive, please save a good level 0 archive from your OB1 system (at 12z or 00z).

To make a level 0 tape backup do the following. On ds1 as root type:

```
su - informix

export TERM=VT100

ontape -s -L 0
```

When finished, remove the tape from DS1 DAT tape drive and Label it Release 5.2.2 level 0, date it, then put in a safe place. Next, put a new scratch tape in DS1 DAT drive and label it "Release OB1."

9. Secure a Good LDAD Backup

LDAD executables and/or configuration files have been changed as a result of this installation. Therefore, once the installation has been completed, you have performed the after-installation procedures, and you are satisfied that your system is working correctly, you should generate a new LDAD backup. We suggest that this be done a week or so after the upgrade. Assuming it has been signed by the time you do the OB1 upgrade, use System Administration Note 12 entitled "LDAD Backup and Restore Procedure." This document when finalized and signed will be placed on the following web page:

http://www.oso3.nws.noaa.gov/awips_new.htm

10. Checking DS Server Failover Configuration

At some point a week or so after the upgrade, you should check to ensure that DS failover configurations are correct. Use the document entitled "Checking DS Server Failover Configuration." If you don't have a copy, it can be found with the other OB1 documentation at the following web page:

http://www.oso3.nws.noaa.gov/awips_softwre.htm

Attachment "a" - R5.2.2 LDAD and MSAS Files Automatically Overwritten During Part 2

Attachment "a" section B contains the R5.2.2 files that will be overwritten with OB1 versions during the OB1 LDAD install in Part 2. The original OB1 files will be stored to /px2data/BACKUPLDAD522

A. LDAD files not activated during the OB1 upgrade

The /ldad/data/Menu.mb.OB1bsln file will not be activated during the upgrade. Sites do not need to activate the file after the upgrade but they may want to read the release note about the file when they have time.

The following LDAD files will be updated (replaced) in OB1:

B. Below is the list of LDAD files to be updated in OB1. The R5.2.2 version of these files will be backed up to /px2data/BACKUPLDAD522.

AS12:/awips/fxa/htdocs/ldadMon/bin/MakePROCpage REP
AS12:/awips/fxa/ldad/bin/cleanMsg REP
DS:/awips/fxa/ldad/bin/breakLogLDAD REP
DS:/awips/fxa/ldad/bin/cleanMsg REP
DS:/awips/fxa/ldad/bin/faxTclsh REP
DS:/awips/fxa/ldad/bin/faxWish REP
DS:/awips/fxa/ldad/bin/preprocessRRS.pl REP
DS:/awips/fxa/ldad/data/AlaskaProfilerInfo.config REP
DS:/awips/fxa/ldad/data/GENERIC.stat REP
DS:/awips/fxa/ldad/data/JNUStation.txt REP
DS:/awips/fxa/ldad/data/LdadPatterns.txt REP
DS:/awips/fxa/ldad/data/cshrc_ds.csh REP
DS:/awips/fxa/ldad/data/environs REP
DS:/awips/fxa/ldad/data/helpfile REP
DS:/awips/fxa/ldad/data/ingestLogPref REP
DS:/awips/fxa/ldad/data/jnu.desc REP
DS:/awips/fxa/ldad/data/jnuProfiler.desc REP
DS:/awips/fxa/ldad/data/ldasys.dat REP
DS:/awips/fxa/ldad/data/logPref REP
DS:/awips/fxa/ldad/data/rhosts_as REP

DS:/awips/fxa/ldad/data/rhosts_ds REP
DS:/awips/fxa/ldad/lib/faxHelp.tcl REP
DS:/awips/fxa/ldad/lib/faxTree.tcl REP
DS:/awips/fxa/ldad/lib/tclIndex REP
LS:/ldad/bin/CO_serv REP
LS:/ldad/bin/MakePROCpage REP
LS:/ldad/bin/calculateNumObs REP
LS:/ldad/bin/callSite.ksh REP
LS:/ldad/bin/campbell REP
LS:/ldad/bin/check_reply REP
LS:/ldad/bin/cleanMsg REP
LS:/ldad/bin/kill_tell_co REP
LS:/ldad/bin/listener REP
LS:/ldad/bin/newLDADdataNotification REP
LS:/ldad/bin/rb REP
LS:/ldad/bin/rc REP
LS:/ldad/bin/rx REP
LS:/ldad/bin/rz REP
LS:/ldad/bin/sb REP
LS:/ldad/bin/suaReceiver REP
LS:/ldad/bin/sutron REP
LS:/ldad/bin/sx REP
LS:/ldad/bin/sz REP
LS:/ldad/bin/tell_co REP
LS:/ldad/bin/zcommand REP
LS:/ldad/bin/zcommandi REP
LS:/ldad/data/GENERIC.stat REP
LS:/ldad/data/Menu.mb POS
LS:/ldad/data/cshrc_ls.csh REP
LS:/ldad/data/environs REP
LS:/ldad/data/helpfile REP
LS:/ldad/data/ingestLogPref REP
LS:/ldad/data/kermrc REP
LS:/ldad/data/ldasys.dat REP
LS:/ldad/data/logPref REP
LS:/ldad/data/rhosts_as REP

The following MSAS files will be updated (replaced) in OB1:

C. Here is the list of MSAS files to be updated. The R5.2.2 version of the replaced files will be saved to /data/fxa/BACKUPMSAS522.

AS12:/awips/fxa/ldad/MSAS/WFOA_MSAS_GridSetup REP
AS12:/awips/fxa/ldad/MSAS/bin/asos.exe REP
AS12:/awips/fxa/ldad/MSAS/bin/qcstats.exe REP
AS12:/awips/fxa/ldad/MSAS/bin/qcstg3.exe REP
AS12:/awips/fxa/ldad/MSAS/bin/sfcanl.exe REP
AS12:/awips/fxa/ldad/MSAS/bin/sfchqc.exe REP
AS12:/awips/fxa/ldad/MSAS/bin/sfcing.exe REP
AS12:/awips/fxa/ldad/MSAS/bin/sfcncdf.exe REP
AS12:/awips/fxa/ldad/MSAS/bin/sfcnmc.exe REP
AS12:/awips/fxa/ldad/MSAS/bin/sfcver.exe REP
AS12:/awips/fxa/ldad/MSAS/fslparms/sysdef.txt POS

Attachment "b" - Optional Procedures to Obtain Data During the Upgrade Via the WAN

There are two procedures in this attachment. The first is to obtain data, from the backup site via the WAN, while the upgrade is going on. The second allows the site to use the WAN to run XNOW at a backup site and examine the results.

1. Procedure to obtain data via the WAN during the install

Summary:

This procedure is designed to allow forecast offices to continue to use AWIPS to some degree during lengthy installations of major software builds/releases. Sites may wish to use this procedure in conjunction with service backup during the OB1 upgrade. You may wish to contact your AWIPS Regional Focal Point for Regional guidance.

This procedure will not be performed during periods of severe weather over either the forecast areas of the site being upgraded or the backup site. It should only be used during benign weather. Further, this procedure will tax the processing power of the backup sites workstation(s).

In coordination with a backup site, using one its workstations, the site being upgraded will log into the designated backup site's workstation. The upgrade site will then be able to obtain text, graphics, and limited image data over the wide area network (WAN), and continue producing routine forecast products.

Displays created on the backup site's workstation will be transmitted over the WAN to the upgrade site. Text and graphics displays are not as fast as it would be on your own AWIPS - there will be a time delay because of WAN bandwidth limitations. Image data is even slower.

The following instructions assume AKQ is the backup site whose workstation will be used for backup support. The workstation will be ws5-akq. The upgrade site is LWX and its workstation is ws4-lwx. The upgrade site will remotely log in and run a D2D session. These AWIPS identifiers are for illustration only. During actual use, substitute the actual identifiers of the backup and upgrade sites and workstations involved.

A. Setup Instruction at the backup site (AKQ)

Preliminary Setup Instructions for the ESA:

First, the backup site (AKQ) needs to do a second localization on the workstation to be used as the backup workstation. The second localization needs to be that of the upgrade site. In this example, the second localization is LWX.

To do so, the ESA must first verify that the /awips/fxa partition on the workstation to be used is no more than 85%. If the partition is >85%, the workstation already has a second localization on it. Choose another workstation, because a third localization could fill up the partition.

Then, as **fxa** on a workstation whose '/awips/fxa' partition is < 85%

```
cd /awips/fxa/data/localization/scripts
./mainScript.csh LWX
```

Note that the local site changes to the upgrade site, i.e., LWX, and will be remotely running the D2D.

Leave the Ingest site alone (Here it is AKQ since it is the site providing service backup. By not specifying the ingest site, it will default to ds1's ingest site which is AKQ)

After this localization, whenever you start D2D on this workstation, either locally at the AKQ workstation or remotely at the LWX workstation, the D2D initial display will allow you to choose the localization...AKQ or LWX. The local site (AKQ) still uses the AKQ localization while the remote site (LWX) will login and start D2D with the LWX localization. Both sites could be on line together, but with each localized to their site.

B. Setup Instructions at the upgrade site (LWX)

The upgrade site must do the following in order to run D2D remotely from AKQ

On the upgrade site workstation open a telnet session by right clicking on the background screen, then left clicking on "telnet".

Login in to your site (upgrade) as awipsusr (you will need your local password). Then set the display to your local workstation

```
setenv DISPLAY ws4-lwx:0.0
xhost +
```

Now, remotely log in to the backup site

```
rlogin  ws5-akq.er
```

You will need to enter the backup site's password at the prompt.
Then, as awipsusr on the backup site, set the display to your local workstation

```
setenv DISPLAY ws4-lwx.er:0.0
```

Now, start D2D

```
start-d2d &
```

Since the workstation has a second localization (LWX), starting D2D will allow you to select which localization to use.

Left click on the AKQ button, then left click on the LWX button. Finally, left click on the start button to start a D2D with the LWX localization.

D2D will take a while to come up (5 minutes for the main pane and ten minutes for all panes).

C. Shut down instructions at the upgrade site

Close D2D as you normally would. Then hit the enter key to retrieve the telnet prompt.
Finally, type exit at the telnet prompt to disconnect your workstation from the remote site.

D. Additional Comments:

1. It is better not to have the backup site use the designated workstation. This allows a quicker response to the upgrade site. Also, if both sites run both heads, the probability is high that the system will shut down.
2. To bring up the Text Workstation, use the "Tools" pull down menu and left click on text window as you normally would.
3. Do not close the telnet window! If you do this, it will break the connection between the sites. It is best to iconize the telnet window.
4. Please keep in mind that the system can be very slow in this mode...be patient, particularly if you are retrieving images or a large number of graphics.

2. Procedure to Use XNOW VIA the WAN during the upgrade

During the upgrade, VIA the WAN, you may wish to run XNOW on a backup site's work-station and display results on your workstation. To do this, use the following sample procedure.

A. Setup Instruction at the backup site (AKQ)

Coordinate with the backup site and ensure the backup site's XNOW is configured to provide Service Backup for the upgrading site.

B. Setup Instructions to Use XNOW at the upgrade site (LWX)

The upgrade site must do the following in order to run **XNOW** remotely from AKQ.
On the upgrade site workstation open a telnet session by right clicking on the background screen, then left clicking on "telnet".

Login in to your site (upgrade) as **awipsusr** (you will need your local password). Then set the display to your local workstation

```
setenv DISPLAY ws4-lwx:0.1
```

0.1: means use the right screen
ws4 to use Workstation 4

```
xhost +
```

Now, remotely log in to the backup site (assumed to be ws5 at akq)

```
rlogin ws5-akq.er
```

You will need to enter the backup site's password at the prompt.

Then, as awipsusr on the backup site, set the display to your local workstation

```
setenv DISPLAY ws4-lwx.er:0.1
```

Now, start XNOW. Change directory to location of xnow.tcl and run.

```
cd /home/xnow/xnow/bin
```
(may be at a different location at other offices)

```
./xnow.tcl
```

C. Shut down instructions at the upgrade site

When you are done, shut down XNOW in the normal way.

Attachment "c" - A list of Some (Non-LDAD) Files Changed in OB1 (any site-added changes to these will be lost)

In Parts 0 -14, we point out files which may have customization/localization issues associated with them in OB1. The following are other files which are changed in OB1 which may also be "problem" customization/localization files. It is possible that after the upgrade, the site may have to merge customized changes back in.

The files in Section 1.0 deal with non-IFPS and non-LDAD files. For your information, Attachment "a" has information dealing with LDAD files.

1.0 List of non-IFPS files:

File Names and Runtime Directory names for AWIPS files which are changing in OB1 and which the sites might have changed will be listed below, if they become available.

Attachment "d" - OB1 Freeware and COTS Changes

A. General comments on freeware changes

Usually with each new release of AWIPS there are upgrades with some of the public domain software packages. Sometimes new packages are also included. AWIPS includes freeware in the baseline almost exclusively in support of the national-provided applications. Sites writing local applications can either use the AWIPS-provided packages or download their own versions in the directories approved for local installations. Local applications choosing to use the AWIPS-provided freeware have to be cognizant of the fact that these versions may change per release. AWIPS maintains a web site where changes to the freeware for each upcoming release is posted. The URL for this site is:

http://isl715.nws.noaa.gov/awips/sw/cotsfree.html

Sites should be aware of the proposed changes for new AWIPS releases by reviewing the web site frequently or interacting with the LAWG. The AWIPS Software Engineering Group (SwEG) encourages feedback and comments on proposed changes to the freeware baseline.

Please note that AWIPS currently has a policy of including all its own freeware as a separate installation rather than rely on freeware that might come with the operating environment (OE) even if the versions that AWIPS uses and the OE provides are the same. This is to ensure AWIPS control over the stability of its software environment. With the advent of Linux, stability in the operating environment might be difficult to achieve given the rapid rate of Linux operating system upgrades and/or RedHat or other vendor operating environment upgrades. Therefore, AWIPS has opted to include all its own freeware and has instituted a policy for all national baselined software to restrict its use of freeware to the AWIPS provided versions.

B. Freeware changes for OB1

A summary of the freeware changes for OB1 can be found in the following table

Package	Old Version(5.2.2)	OB1 Version	Notes
Python	2.2	2.2.1	HP and Linux
Scientific Python	2.0.1	2.0.1	HP and Linux
Numerical Python	20.1.0	20.1.0	HP and Linux
Python megawidgets	0.8.5	0.8.5	HP and Linux
Open Motif	2.1.30-4MLI	2.1.30-4MLI	Linux only
ImageMagick	5.3.9	5.3.9	Linux only
libpng	1.0.6	1.0.6	No update
Java Runtime Environment (JRE)	1.3.1	1.3.1	HP and Linux
JClass Chart	4.5.1K	4.5.1K	Linux only
Informix JDBC Driver	1.5	1.5	HP and Linux

C. COTS changes for OB1

None.

Attachment "e" - Additional ICAT information

Background Information:

ICAT is a tool in AWIPS OB1 which can be used to assist in preserving site customizations across AWIPS upgrades. ICAT identifies customizations made to selected configuration files and restore those local customizations after the upgrade.

The tool is executed in 2 parts: one before the upgrade (referred to as ***pre-install ICAT***), the other after the upgrade (***post-install ICAT)***.

The pre-install ICAT is used to find differences between currently operational files and their counterparts originally delivered as part of the previous release. In other words, pre-install ICAT will identify customizations applied by the site to the previous release's delivered (baseline) files. It then examines the content of the corresponding files being redelivered as part of the new release, and applies those customizations to them, generating site customized versions of the new baseline files. These new customized files are subsequently activated by the "post-install ICAT." Pre-install ICAT will also highlight any conflicts between local customizations (including override files in certain subdirectories) and changes appearing in the new baseline.

VERY IMPORTANT

"Pre-install" ICAT has a very nice feature which allows you to **examine** each OB1 file that ICAT generated with the ICAT merged customized changes. **It is essential that you use this feature for each ICAT generated file**!!!!

Do not assume that the ICAT created file is perfect....Check it!! ICAT is a useful tool but is not infallible!

Post-install ICAT is run after the OB1 AWIPS upgrade has been completed. This part copies the files created by pre-install ICAT into their runtime locations, and identifies any localization tasks that need to be run. Once re-localized, sites can resume operations.

Run *pre-install ICAT*:

If you wish to use ICAT, go to the attached document called **ICAT Users Manual** and **read the entire document**. Also examine the information in the box below.

The following highlights important information found in the ICAT manual:

A. A **log file** is created to record pre-install ICAT activities and results. It is located in the **/awips/fxa/data/localization/ICAT/Work/*hostname*** directory on the server or workstation where ICAT was just run. To view the file, type in the following command.

more /awips/fxa/data/localization/ICAT/Work/*hostname*/log

where *hostname* is the hostname of the server or workstation.

B. The files that pre-install ICAT creates are found in**:** **/awips/fxa/data/localization/ICAT/Work/hostname/rt-out**.

C. Backups of the operational R5.2.2 files examined by ICAT are located in: **/awips/fxa/data/localization/ICAT/backup-5.2.2/hostname**.

D. The ICAT feature that allows you to **examine** each OB1 file generated by "pre-install ICAT" is found in **Pre-install ICAT, step 5**. You can examine each OB1 file generated by "pre-install ICAT" by clicking the "View Merged Files..." button when ICAT starts up.

After reading the ICAT users manual and examining the heads up information in the box above, do the commands in the 2 sections entitled:

a. Pre-install ICAT Concept of Operation for OB1

b. Instructions for Installing ICAT from the CD (prior to installation of OB1)
(Must be done before running pre-install ICAT)

c. Instructions for Running Pre-install ICAT (Prior to Installation of OB1)
For help, call David Friedman 301-713-0211 x138

Attachment "f" - OB1 OHD Pre-Install Instructions

There are 3 sections in this attachment.

1. Section A are pre-install procedures that all sites need to do.
2. Section B are pre-install procedures that WFOs type sites need to do.
3. Section C are pre-install procedures that RFC type sites need to do.

Section A: All sites need to do the following

Make a copy of the script which purges the MPE files, since this file is updated as part of the install process, and sites may have made local changes. To copy this files, issue the command, as user oper:

```
cd /awips/hydroapps/precip_proc/bin
cp purge_mpe_files purge_mpe_files.r522
```

This will create a copy of the 5.2.2-version of the purge_mpe_files script with a unique name.

Section B: WFO type sites

No procedures at this time.

Section C: RFC type sites

After the OB1 upgrade has been completed, you will notice that the delivered XDAT and XNAV files have a problem and need to be replaced. We suggest that you can contact the HSD RFC support people now and make arrangements to obtain the updated XDAT and XNAV files.

Attachment "g" - OB1 OHD Post-Install Instructions

There are 3 sections in this attachment.

1. Section A are post-install procedures that all sites need to do.
2. Section B are post-install procedures that WFOs type sites need to do.
3. Section C are post-install procedures that RFC type sites need to do.

Section A: All sites need to do the following

1. Adjust the /awips/hydroapps/precip_proc/bin/purge_mpe_files to account for any local changes made to this script. The OB1 install provides a new purge_mpe_files script which means that any local changes made are lost. As part of the pre-install procedures, this file was copied to the same directory, with the name purge_mpe_files.r522.

   Compare the (old) .r522 script with the (new) purge_mpe_files script. This can be done by issuing the following commands:

   ```
   cd /awips/hydroapps/precip_proc/bin
   diff purge_mpe_files purge_mpe_files.r522
   ```

   Note that the new script will reference the new "disagg" directory; this should be left in the new script. However, the number of days to retain, as specified in the script, needs to be restored if it was changed in the .r522 script. These changes are described in Section V. Reducing Disk Space Usage by MPE Files, of the document entitled "Hydroview_MPE Implementation Document - Awips Release 5.2.2", dated November 13, 2002.

   For example, the new script file will have the line:

   find $RWMMOSAIC -name '*z' -mtime +1 -print -exec rm {} \; >> $fnm

   which may have been changed in the .r522 file to

   find $RWMMOSAIC -name '*z' -mtime +0 -print -exec rm {} \; >> $fnm

   In this case, use any text editor to simply change the +1 back to +0, and repeat as necessary for other lines in the file.

Section B: WFO type sites

No procedures at this time.

Section C: RFC type sites

1. The RFCs are receiving a new temporal disaggregation component to MPE with this release. The "disagg" component disaggregates the multi-hour gauge measured precipitation into single hour accumulations based on the MPE hourly 'best' precipitation field. To make use of the MPE hourly estimates, disagg needs to be run after MPE_fieldgen is run, and to incorporate the disaggregated values into an updated multi-sensor hourly estimate, MPE_fieldgen must be run again after the disagg component is executed. Therefore, the cron which RFCs use to execute MPE_fieldgen every hour should be updated to include the execution of the disagg component and then the execution of the MPE_fieldgen program.

   RFCs may configure the cron as they choose as long as the execution sequence of MPE_fieldgen, disagg, MPE_fieldgen is established.

   The following scripts are delivered to assist with the execution.

   run_mpe_fieldgen -- executes MPE_fieldgen, unchanged
   run_disagg -- executes the disagg program; new
   run_disagg_fieldgen -- executes the disagg program and then the fieldgen program; new

   For assistance setting up this cron please contact the HSD support team.

2. **Adjust the tokens.** Tokens need to be changed for the decodedpa processing.

   The defaults settings for these tokens in the national token file are defined for WFO usage. Therefore RFCs may wish to review and adjust the settings. Specifically, in the file **/awips/hydroapps/.Apps_defaults_site** use a text editor to do the following:

   a) remove the following obsolete tokens:
      dpa_filter_window, dpa_filter_archive;

   b) review and adjust the following new tokens:
      dpa_decode_window, dpa_archive, dpa_archive_window

which work in conjunction with the existing token dpa_filter_decode. A discussion of these four tokens is given below. There are two tokens for handling the decoding performed by the dpadecoder, and two similar tokens for handling archiving performed by the decoder. RFCs may wish to modify the default settings to enable archiving.

dpa_filter_decode : ON (Default value)

Description: This is an on/off switch for filtering non-top-of-hour products from decoding processing.
Settings: ON = filter out non-top-of-hour products in accordance with the value of the dpa_decode_window; OFF = do not filter out any products (i.e. attempt to decode all products); the value of dpa_decode_window is ignored for this case.

dpa_decode_window : 10 (Default value)

Description: Number of minutes around the top of the hour for filtering products to be decoded. This token is used only if the dpa_filter_decode token is set to ON. Products with times not within the specified minutes from the top of the hour are filtered out. The allowable values are 0 - 30.

dpa_archive : OFF (Default value)

Description: This is an on/off flag for archiving products.
Settings: ON = archive products within the window defined by the dpa_archive_window token value; OFF = do not archive any products, in which case the dpa_archive_window token is ignored.

dpa_archive_window : 10 (Default value)

Description: Number of minutes around the top of hour for filtering products to be archived. This token is used only if the dpa_archive token is set to ON. Products with times not within the specified minutes from the top of the hour are not archived.

3. Now that the OB1 upgrade is done, you will notice that the delivered XDAT and XNAV files have a problem and need to be replaced. We suggest that you can contact the HSD RFC support personnel and make arrangements to obtain the updated XDAT and XNAV files.